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A DAY

IN

The New York Crystal Palace,

AND

HOW TO MAKE THE MOST OF IT:

BEING A

POPULAR COMPANION TO THE "OFFICIAL CATALOGUE," AND A GUIDE TO
ALL THE OBJECTS OF SPECIAL INTEREST IN THE NEW
YORK EXHIBITION OF THE INDUSTRY
OF ALL NATIONS.

BY

WILLIAM C. RICHARDS, A.M.,

EDITOR OF THE "OFFICIAL CATALOGUE."

"But as I slept me mette I was
Within a temple ymade of glas,
In which there were no images
Of gold standing in sundry stages,
In no rich tabernacles,
And with perrie no pinnacles
And no curious portraictures,
And qneint manner of figures
Of gold work, than I saw ever."

Chaucer.



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M.DCCC.LIII.

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TO
THEODORE SEDGWICK, ESQ.,

PRESIDENT OF THE ASSOCIATION

FOR THE

EXHIBITION OF THE INDUSTRY OF ALL NATIONS,

ORGANIZED IN NEW YORK, IN 1852,

AND

EXHIBITING NOW THE GRAND RESULTS OF ITS ENTERPRISE AND ENERGY

IN

THE AMERICAN CRYSTAL PALACE,

This Little Volume,

DESIGNED AS A POPULAR EXPOSITION OF THOSE RESULTS, FOR PRESENT

USE, AND FUTURE REFERENCE,

IS,

WITH SENTIMENTS OF SINCERE ESTEEM,

INSCRIBED BY

THE AUTHOR.

PREFACE.

THIS manual has been prepared to supply a want expressed by thousands, and probably felt by all, of those who have visited the Crystal Palace. The Official Catalogue, indispensable in itself as a complete and systematic inventory of the thousands of objects embraced in the Great Exhibition, is, yet, in the very nature of the case, deficient in that sort of information concerning the chief attractions of the Palace which the visitor requires.

The author of this little work has prepared it under some embarrassments, and especially that of exacting daily duties, but in pleading them in extenuation of the defects which it may be found to contain, he would, at the same time, state, and he hopes, without incurring the charge of vanity, that he had peculiar facilities for the preparation of the work. For a period of five months he has been connected with the Association as the Editor of its Official Catalogues, and much of that time he has passed in close and careful inspection of the articles exhibited in all departments of the Exhibition.

It would not have been difficult to write a large volume upon the Exhibition, in which he might have indulged in description and illustration, but to condense the needed information into the limits of a manual—"hoc opus, hic labor est."

The visitor may not, improbably, find the guide-book sometimes in fault, it may be from oversight or actual mistake, but still more probably from disarrangement of the objects in the Palace by occasional withdrawals, or by tardy additions of articles.

It is believed that the visitor desiring to see the Exhibition thoroughly, and willing to follow a guide implicitly, will find this manual an efficient help.

The title of the book has been chosen, not to indicate the amount of time which may be profitably devoted to the Exhibition, for in that case it should have been "A Week in the Crystal Palace," but to encourage those who have only "*a day*" to spare, to devote that

day confidently and with determination to the object, and to give them such aid as will enable them, *within the day*, to see the entire Exhibition, not in detail, but still with much satisfaction.

The work has been prepared with reference to the wants of the visitor *in the Palace*, but it is believed that it will be found to possess an interest beyond this special aim, and for thousands who find it impossible to see, for themselves, the Great Exhibition which it commemorates.

The degree of benefit which the visitor to the Crystal Palace will derive from it, will be in exact proportion to the fidelity with which the course it points out is followed. It is confidently believed that no one can inspect the contents of the whole building by an easier method than the one it prescribes, and a slight attention to its instructions and indices will obviate all difficulty in making the tour of the building as it is there marked out.

There is a vein of regret mingling with the pleasure with which this little work is dismissed from the hands of its author. It is occasioned by the immediate departure, from the scene of their successful labours, of the two gentlemen who have so ably superintended the whole interior economy of the Crystal Palace, and under whose auspices the author's labours in the Catalogue Bureau were so agreeably performed. To Captain S. F. DUPONT, U. S. N., and to Lieutenant C. H. DAVIS, U. S. N., the author acknowledges his obligations for the aid and courtesy they have constantly extended to him, during his official connection with them.

They depart to fulfil the imperative duties of their respective stations, and leave all who have known them, either personally or officially, to regret that they could not conduct to its close, the Exhibition so successfully opened, and hitherto carried on, under their direction.

The author avails himself of this opportunity, while introducing to the public his unpretending little manual, to refer to the "*Illustrated Record*" of the Exhibition as a source of full information upon the principles and processes and results involved in this great display of human industry.

If this manual should prove acceptable to the public, and useful to those who may consult its pages, the author will be rewarded for his care and toil in its preparation.

CRYSTAL PALACE, Oct. 28th, 1853.

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A DAY

IN THE

New York Crystal Palace.

GENERAL VIEW.

THE CENTRE AND NAVES.

THERE are three grand entrances into the Crystal Entrances. Palace, at the north, west, and south extremities of the cross which its intersecting naves constitute—the eastern extremity merging into the Machine Arcade. The visitor, entering at either of the gates, should proceed immediately to the centre, both for the fine *coup d'œil* which he will there obtain and for the convenience of starting upon the systematic tour of observation which this Manual is designed to point out. The view of the dome can hardly fail THE DOME. to gratify and surprise the beholder, from the contrast of its vast size and its extreme airiness. Springing from the columns which support it at the height of 70 feet, and with a diameter of 100 feet, it rises to the elevation of 123 feet at the crown, and is the largest dome in the Western World. Its slender ribs of iron seem inadequate to sustain its vast size, and it presents the appearance of a balloon expanded and impatient for a flight into the far-off sky.

Shape of the building.

The shape of the ground upon which the building is erected, involved the necessity of a plan of construction quite unfavourable to that simplicity of arrangement which obtained in the London Exhibition. There, the visitor's course was obviously in one direction, throughout the extreme length of the parallelogram. Here, four equal sections or divisions present themselves to the spectator standing beneath the dome. These are separated by the arms of the cross, which are appropriately designated the naves of the building, extending from the centre in the directions of the cardinal points of the compass.

The grand division.

Naves,

These avenues are each forty-one feet wide, and contain many of the most conspicuous objects of the Exhibition, embracing particularly the statuary in bronze and marble.

Courts.

The Divisions are subdivided into Courts,—and these are appropriated to one or more of the distinct Classes into which all the objects upon exhibition have been carefully arranged. For the names of these classes, and the courts they occupy in the various countries, the visitor must consult the Official Catalogue, to which this Manual is a companion or guide, and which it is deemed injudicious to encumber with tabular plans already freely accessible.

Classes of the Catalogue.

First steps.

The first thing to be done after the inspection of the dome, and the general view of the building from the centre, is to observe the signs which are prominently displayed to indicate the different naves and divisions. It is of importance to know which is North, and which South—which is East, and which West; for the interior of the Palace is a maze which readily bewilders the spectator. A still closer observation will reveal to the eye, at intervals, along the naves and suspended from the galleries, the flags of the different nations which occupy the recesses of the division.

Signs.

National Flags.

It is an easy matter to obtain, before leaving the Starting well. centre, a definite idea of the ground to be traversed, and of the position of countries upon the floor of the building, without which every step of progress will be embarrassed.

The plan which this Manual indicates for the Method. inspection of the Crystal Palace, was not adopted without deliberation. It is the result of much thought and repeated experiment for the discovery of the best way to see the whole Exhibition in the shortest possible time and with the least possible weariness.

The visitor who has but a single day to spare, Advantages. will find his advantage in pursuing it; while the one who makes repeated visits, cannot compass the building more thoroughly or profitably by any other method.

The majority of those who enter the Crystal Pal- Need of a ace, do so with the intention of seeing it all at once; guide. and without such a manual as this, or an intelligent guide at their elbow, they will find their purpose sadly frustrated.

The objects placed within the central court may The centre. very naturally claim our first notice. Most conspicuous of these is a colossal equestrian statue of Washington, modelled in plaster by the Baron Equestrian MAROCHETTI, an Italian sculptor, now a resident of statue of London, from which place the contribution was Washington. sent. It is designed to be cast in bronze, and should occupy a position much more elevated than its present pedestal before its just merit as a work of art can be determined. The artist has made several colossal statues, which have elicited general approbation in England.

Within the shadow of the colossal horse, upon Candelabra. both the north and south sides, stand large candelabra, wrought in alabaster by an Italian artificer.

They are good examples of their kind, and finely adapted for the halls of the fine old palaces which exist in Italy, but they would be deemed too cumbersome for our style of adornment.

THE AMAZON. The famous Amazon group—the great work of the Berlin sculptor, KISS—is placed a little south and east of the centre, and will reward the earnest attention of the spectator. It is a copy of the original work in bronze which was placed at the entrance of the Royal Museum at Berlin. The design and success alike of the artist, are instantly apparent. The ferocious tiger which has fastened itself upon the neck of the terrified horse, appears utterly unconscious of the presence of the rider. She, an Amazon of the most majestic physique, alarmed but not overwhelmed by the sudden attack, is intent only upon the destruction of the fierce assailant, for which she poises her spear with a wild and titanic energy well displayed in her countenance and action. It is a grand work, both in design and execution.*

See note.

**POWERS'S
WORKS.**

The transition of feeling with which one turns from this bold and impressive work to the exquisitely beautiful statuary of the American POWERS, just beneath it, is not unlike that which is experienced in passing from the contemplation of an ocean tempest to that of a mountain-girded lake, sleeping in the serene beauty of sunset.

* Since the foregoing description was put in type, several pieces of statuary have been received and placed around the pedestal of the Amazon group. They are six in number. The first—beginning at the extreme left, fronting Powers's group—is "A Bacchante," by V. LUC-CARDI of Rome; the next, a "Bacchus" by E. GUACCARINI of Rome; the third and fifth are busts by IVES of Connecticut, the one a Ruth, and the other a Bacchante; the fourth, and central figure, is entitled "Maternal Solicitude," and is a very beautiful work by BELZONI of Rome; the sixth is a statuette of "Samuel," also by E. GUACCARINI. All these works are contributed to the Exhibition by B. GRAVES, Esq., of New York City, who is their fortunate proprietor.

Here are four of the justly admired productions of the Western sculptor's chisel, of which the "Eve" The Eve. is the latest—and, let us be pardoned for adding, the most beautiful. It was executed by the artist at Florence, under a commission from Col. JOHN S. PRESTON, of South Carolina, and was by his generous permission first publicly exhibited in Charleston, at the Fair of the South Carolina Institute, in 1851. The present opportunity of inspecting this beautiful work is perhaps the only one which the public generally will enjoy.

The "Fisher Boy," and the classical bust of Pro- Fisher Boy. serpine, are exhibited by the courtesy of their fortunate proprietor, SIDNEY BROOKS, Esq., of New York. Proserpine. The "Greek Slave" is still the property of the artist, Greek Slave. and is, we believe, a duplicate of the original, owned in London.

Just north of this attractive group is a work in OTTEN'S Group in bronze. bronze by OTTEN, a French sculptor. It is of the same general character with the Amazon of Prof. KISS. A cavalier on horseback is attacked by an enormous serpent, which has wound itself about the animal, and has raised its fearful crest to strike the rider, who, with evident dismay, but a still, terrible courage, is aiming to send an arrow into the open jaws of the reptile. The work displays a bold conception, and is in many respects powerfully wrought.

A fitting opportunity here presents itself for the notice of a female bust in marble, by IVES. Bust by IVES. Whether it is a portrait or ideal work we are left to conjecture. It is placed at the right of the serpent-group; while on the opposite side is a marble bust of Daniel Webster, by KING. Bust of Webster by KING. Fronting the north nave, but fully within the centre, there are two portrait-busts in marble, by KINNEY, of Worcester, Massachusetts, Two busts by KINNEY. which are placed on either side of a free and effective piece of sculpture by LEVEQUE, of France. The

LESBIA.

sculptor calls it "Lesbia;" perhaps from the heroine of Moore's popular song—

"Lesbia hath a beaming eye."

It is a recumbent figure, of an outline and development in strong contrast with the delicacy of the "Eve," not far removed.

Italian
sculpture.

COLUMBUS.

To the left of this work, and in a recess of the centre between two of the principal stairways to the Gallery, is a group of works in marble, which will introduce the visitor to the Italian sculptors. The central figure is that of Christopher Columbus, of life size, and well expressing the energy and nobility of character which marked the great discoverer. It is from an original model by Signor COSTA, of Florence. On each side of it stands a statuette, the one representing the Genius of Spring, and the other the Genius of Summer. They are admirable and pleasing works, contributed, with several others, by the sculptor, Signor PELLECIA, Director of the Academy of Fine Arts at Carrara.

PELLECIA'S
statuettes.The
Mendicant.

Fronting the west nave, there is another group of Italian statuary deserving notice. A touching air of reality seems to rest upon the face of "The Mendicant," whose hand is stretched out as if to implore charity from the passer-by. It is the work of STRAZZA, a sculptor dwelling in "the Eternal City." The next is a more pleasing subject, handled with

The Guardian
Angel.Psycho
grieving.
Rebecca.

much delicacy. It represents a guardian angel turning the steps of Innocence from danger, which is personified in the snake. This work, as also the statue of "Psyche grieving," near at hand, is from the chisel of BIENAIMÉ, of Rome. The "Rebecca," one of several works by VASSÉ, of Florence, completes the group.

A corresponding recess upon the left, to the one just mentioned upon the right, presents a copy in

marble of the "Flora del Campodoglio," with two statuettes, one on each side, which, from the nature of their subjects, are very pleasing works. They are "The Industrious Little Girl," by MAGNI, and "The Soldier's Son," by JORINI, both Italian sculptors, but included, by the chances of political fate, among the Austrian contributors, as belonging to Lombardy.

Flora of the Capitol.

Italian works from Austria.

Another group in front of the south nave completes our view of the centre. Besides the "Psyche," already mentioned, there is here a beautiful statue by EMILIO SANTARELLI, of Florence. It represents "Harpocrates," who, the classical reader will recollect, is the god of Silence, in the beautiful mythology of the Greeks. The trio of this group is completed by a "Bacchante," playing on a flute—one of the works contributed by Signor PELLECCIA, already named.

The god of Silence.

A Bacchante.

The centre finished, the four naves of the Palace naturally invite inspection; and the visitor is recommended to take them all in turn, before plunging into the Divisions, which they bound.

The naves.

Entering the south nave, upon the left hand a bronze dog plays silent sentinel. It is the work of Mr. HOPPIN, of Providence, and was modelled from Nature. It is a good example of statuesque life and action, and is the more to be observed, as one of the few specimens of casting in bronze in this country.

South nave.

Bronze dog, by HOPPIN.

Just beyond and above this, a somewhat startling tableau presents itself, transporting the beholder into ages long gone by. It is a collection of arms and armour from the grim old Tower of London—that palace and prison by turns. Before inspecting them, let the visitor turn and glance his eye to the fronts of the galleries abutting on the centre. There, upon four brackets, and beneath four canopies, at opposite points, may be seen four effigies armed *cap-à-pie* in

Startling tableau.

Armour from the Tower of London.

Effigies.

glittering steel,—visions, like the arms we have just named, of the far-off Past, and, like them, reviving the gloomy memories of the Tower. There is the mailed warrior of the times of the eighth Henry;—there the cavaliers of “Good Queen Bess,” and of the first Charles, arrayed as they were wont to be for the battle-field.

Ancient arms.

Turn now to the tableau, and see the arquebus and the matchlock gun, the cross-bow, the glaive, the martel, the battle-axe, the French pertuisan, the antique sword, the iron gauntlet, the morion, the helmet, the coat of linked mail, the shield, and other ancient accoutrements of war. Observe, too, among these relics of the past, the pistol with *revolving* chambers, and the musket with *changeable* barrels—the prototypes of our modern Colts and Porters.

Modern arms.

These ancient weapons and appliances of war, with others just within the east nave, are all sent to the Crystal Palace by Her Britannic Majesty’s Board of Ordnance. The collection embraces, also, specimens of the modern weapons used in the British army and navy. The exhibition is a significant one—eloquent of the Past, and suggestive of the wonderful contrasts of the Present.

A Cupid.

Continuing down the south nave, we encounter “Cupid with the arms of Mars,”—playthings apparently unsuited to the nature of the urchin. This is the work of a Danish artist, Prof. JERICHAU, of Copenhagen, whose excellent model of Adam and Eve will by-and-by claim our notice. A Sleeping Child, by DUPRÉ, of Florence, is one of several pleasing examples in the Palace, of the high adaptation of marble sculpture to express the idea of repose.

Sleeping
Child.

Warwick
Vase.

On the line of the centre, is a noble copy in marble of the famous Warwick Vase, on three pedestals effectively carved into lion’s heads. It is one of

numerous works—chiefly copies—contributed by MARCHETTI, of Carrara. Immediately beyond this, on the same line, is a group in marble, catalogued in Class xxxi. of the United States, but executed by MÜLLER, a German sculptor. The group is entitled “The Minstrel’s Curse,” and is illustrative of Uhland’s Minstrel’s
Curse. fine poem of the same title.

On the visitor’s left hand, is a complacent “Cupid” A Cupid. in marble, by BANDEL, of London, and, next, a plaster cast of a Venus, by NANNETTI, of Dublin. A Venus. An exquisite statue of Sabrina, by MARSHALL, of Sabrina. London, here recalls the very words of Milton,—

“Sabrina fair,
 Listen when thou art sitting
 Under the glassy, cool, translucent wave,
 In twisted braids of lilies knitting
 The loose train of thy amber-dropping hair :
 Listen for dear honour’s sake,
 Goddess of the Silver lake ;
 Listen and save !”——“*Comus.*”

A succession of several works in plaster—among which will be found “The Emigrant,” by LAWLOR, The
Emigrant. of London, two or three figures by NANNETTI, and a statue of “The Hunter Reposing,” by FARRELL, of The Hunter
Reposing. Dublin—conducts the visitor nearly to the extremity of the nave, overlooking several objects placed along the centre, which may be just as well inspected while returning up the other side. Crossing the nave, therefore, just below a fire-engine and hose-carriage, Fire Engine.—which are both examples of the pride of appearances maintained by our metropolitan fire-companies,—there appear, on the left hand, various bronzes, Castings by
GEISS. copies from famous works, and cast by GEISS, of Berlin, the founder of the Amazon group, already named. An “Eve,” Thorwaldsen’s “Hope,” and a “Niobede,” are good examples of his admirable castings. A little forward are beautiful specimens Berlin iron
castings. of castings in iron from the Royal Foundry at

A Danaide. Berlin. The Berlin iron fabrics are unrivalled by any in the world for delicacy of finish. Between two beautiful examples of its high excellence, there is placed a Danaide, in marble, the work of CARL BARRATA, a German sculptor in Rome.

Chime of bells. A series of four highly ornamented bells, cast by ROSENLAGER, of Constance, in Germany, extends along the centre of the nave. They bear inscriptions in German, which we have rendered into English for the benefit of the curious. The mottoes are given in the order of the bells, ascending the nave.

Inscriptions. "Their sound goeth out over the broad earth."—DAVID.

First. "From Heaven He came whose grace we sing,

Second. A little child our LORD appeared;
Yet He of all the world is King—
The Prince of Peace—the Chief revered!"

Third. "I am the Way, the Truth, and the Life."—JOHN xiv. 6.

Fourth. "Be ye my followers, brethren, and mark those who so walk as ye have a pattern in me."—ST. PAUL.

Fresnel light. An object of great interest now presents itself in the centre of the nave. It is a Fresnel light, made by LEPAUTE of France, and imported by our government for the light-house upon the stormy cape of Hatteras. It consists of a vast lantern, composed of powerful prisms and lenses, which revolve by machinery around the lamp in the interior—a Carcel lamp, with four concentric wicks. The light of this lamp is collected by the lenses into a beam of intense brilliancy, which is projected outward from the panel of prisms, and, as the dome or lantern revolves, a succession of these beams or flashes is produced. The light will be visible for a great distance from the coast, and is the best one of the kind on the western continent. On the line of this nave, the visitor passes a statue of "The Fisherman's Daughter," by Steinhäuser of Germany; a copy from Canova's Hebe; and some very pleasing examples of

Belgian statuary, embracing "The Sleeping Children," in marble, by GEEFS, and three works in plaster by FRAIKIN, among which is a well-modelled Psyche. Belgian statuary.

Entering now the west nave, there appears first, WEST NAVE. upon the left hand, a group in marble, representing "Hagar and Ishmael in the desert,"—the work of Hagar. CASELLI, of Florence. On the middle line is a group of three works in marble, of which the centre is a copy of THORWALDSEN'S "Ganymede and the Eagle." Ganymede. A statuette by PELLECIA of "Herminia writing the name of Tancred," from TASSO'S immortal poem, is Herminia. upon the left, and a "Fisher Boy," by CECCHI, of Fisher Boy. Milan, upon the right. Beyond these is a much admired group in marble, representing "Two lovers Two Lovers. going to the fountain," the work of LAZZERINI, of Carrara, from a design by HENSCHEL.

At this point, the French Government Court, in which the Gobelin Tapestries and Sevres Porcelain GOBELINS. are displayed, opens on the left hand ; but passing by, in strict conformity to the plan of this Manual, the visitor may note upon the central line a reduced copy in zinc of the Amazon group (a good example Copy of Amazon. of the castings of the "*Societe de la Vieille Montagne*," a large French foundry); next, a copy in Houdon's Washington. plaster of HOUDON'S statue of Washington from Richmond ; a magnificent pair of eagles and goat, in Eagles. bronze, designed by FRATIN, and sent by AUBANEL of Paris ; a plaster bust of Washington, after HOUDON, and the plaster models of Adam and Eve by Adam and Eve. JERICHAU, to which allusion has been already made.

The next object may well delay the visitor for a few moments. It is a group in plaster, by LECHESNE Group in plaster. of Paris ; and there are few nobler works in the whole Exhibition. If we interpret the artist's design aright, a shipwrecked mother and her child have been cast upon the shore—the child only surviving.

A vulture approaches, and the affrighted child, attempting to repel it with a frail branch, is attacked by the rapacious bird, who fastens its talons into the tender flesh of the boy. The modelling is admirable, and the whole work full of power.

On the left of it is a statue in marble of "Damalis," by ETEX of France; and beyond it is an example of the application of iron and glass to ornamental architecture—a splendid door-frame of gilded iron, and a door with panels of plate-glass, intended, probably, for the entrance of some Parisian *café* or *magazin des nouveautes*.

A noble figure of a stag here presents itself as a specimen of zinc casting from the foundry of SCHULTZ at Zeyst in Holland. Near it are two wolves, its companion contributions, also in zinc. Behind the stag is a gala carriage—such, probably, as the fair and high-born ladies of the gay city of Paris are wont to disport themselves in, on the Boulevards. It is from the factory of MOUSSARD, and exhibits costly workmanship. At the end of the nave there is a large mirror in an elaborately ornamented frame, manufactured by KINGSLAND & Co., of New York.

Returning on the north side of the nave to the centre, numerous works in marble front the Austrian and Italian courts. There is first, "A tipsy Bacchus," as the catalogue terms it—expressing, we suppose, that state of exhilaration just short of drunkenness. It is by CAMBI of Florence. Next to it is a beautiful work, somewhat vaguely called "A Shepherdess and Bird," from the chisel of BIEN- AIMÉ of Rome. The story of Atala and Chactas, from the exquisite romance of CHATEAUBRIAND, is the theme of a pleasing group by FRACAROLI. The visitor will pause a moment to admire the noble head of Vincenzo Monti, an Italian poet. It is of almost colossal size, the work of Cavalier SANGIORGIO of

Milan, who has also a colossal head of our Saviour in one of the Italian Courts. “Cupid and Psyche” Cupid and Psyche.—a copy from the antique in the Capitol at Rome—is followed by a remarkably pleasing bust of “Iris” Iris. by CARTEI of Florence. Just back of it, hangs a remarkable work which should not be carelessly taken for an oil painting of ordinary merit, of which there is great danger. It is a copy, in stone-mosaic Picture in stone. work, of Guercino’s famous picture of St. John the Baptist, and was made at the mosaic manufactory of the Vatican. It is valued at \$60,000, and is the contribution of POPE PIO NONO. It may not be amiss to suggest here, that a close inspection will reveal to the beholder the small cubes of different-coloured stones, which, deftly put together, compose the picture. There is another, but far less striking, example of *mosaic painting* in the Picture Gallery. Another Mosaic. A remarkable mosaic table-top may be seen just below the St. John.

A statue of “Truth,” holding a mirror to her Truth. face, is a second excellent work, in marble, by the sculptor of the tipsy Bacchus. Next to it is another example of Italian statuary from Austria,—“Eve Eve. after her transgression,” by PAGANI, of Milan. Here also may be seen a mantel-piece of statuary marble, in the Anacreontic style,—not inaptly, though somewhat waggishly, called, in our hearing, “an example of *Cupid-ity*.” Cupid-ity.

The north nave now lies open to us; and upon its NORTH NAVE. very verge, on the middle line, there is a group of works deserving of notice. The central one is a bronze, from the Zollverein; an effective group, Bronze group. modelled by FRANZ, of Berlin, and representing a shepherd attacked by a leopardess, and defended by his faithful dog. Between the grasp of the man’s fingers on her throat and the dog’s teeth upon her ear, the savage beast seems to have the worst of it,

Two busts by
GALT.

and shows signs of retreat. The two delicate and attractive busts on the right and left of this group are from the chisel of GALT, a young Virginia sculptor, who is at present enjoying at home, a brief recess from his studies and labours in Italy. They are respectively styled "A Bacchante" and "A Psyche."

BALL's
Webster.

Descending the nave upon the left hand, in accordance with the plan of the Official Catalogue, observe BALL's statuette of Webster—an admirable and truthful work, which we are glad to see is to be extensively reduplicated in plaster and in Parian clay.

PIATTI's
Works.

Next to a bust of Jupiter, by MARCHETTI, occurs a group of three works—"A Sleeping Child," "The Husbandman's Orphan," and a bust of Daniel Webster. They are from the chisel of ANTONIO PIATTI, an Italian sculptor residing in New York, to whom the superintendence of the statuary in the Exhibition has been entrusted.

Mantels.

In front of these works, the visitor may inspect several mantel-pieces, in white marble, from New York artificers, and, just beyond them, models of a ship and steamboat. The former displays the arrangement of the beams and hatches of a ship's interior. The curious in such matters will do well at this point to turn back a step or two, and inspect a

Ship's hull.

Novel method
of navigation.

model of Captain Tucker's new method of propelling ships, which consists of a huge cylinder to roll upon the waves, impelled by a locomotive engine within.

A font.

Bronze figure.

Beyond a Gothic font in Pictou stone—a contribution from Canada—is a graceful statue in bronze by H. K. BROWN,—a female figure pointing upward. It is the "Angel of the Resurrection," and is designed

Fire-engine.

for Greenwood Cemetery. A powerful fire-engine, of side stroke, stands in the centre, and looks as though it might do good service at a fire, in the

hands of thirty stalwart men. It was made by JEFFERS, of Pawtucket, Rhode Island.

We come now to Genin's showy case, with its multitudinous display of wearing apparel—a miniature reproduction of his unique Bazaar in the St. Nicholas Hotel. “The Child's First Grief,” on the left, is an eloquent little work in marble from the chisel of VASSÉ, of Rome. Immediately north of Genin's case the visitor may inspect various specimens of marbleized iron, such as columns, mantels, and table-slabs, exhibited by the Salamander Marble Company of New York. This is a most ingenious invention, and, we believe, undisputedly of American origin.

Genin's
show-case.

Statuette.

Marbleized
iron.

Herring's iron safes will be found close by. There is one, designed for a jeweller's store, which, from its size, massiveness, and elegance of decoration, it is safe to say, is a very noticeable object.

Iron safes.

A copy by BARRATTA of Bartolini's statue representing “Faith,” is placed just on the left, while on the north are two richly ornamented hose carriages, further examples of the expensive ambition of rival fire companies to make a show with their “apparatus.” The “Hope,” from Philadelphia, is covered with arabesque silver-plate. The “Neptune,” from the same city, is beautifully adorned.

Faith.

Hose
carriages.

Two other works in marble complete the list of the left side of the nave. They are both classical examples—the one a bust of Dante, by MARCHETTI, and the other a statuette of Cicero, by FONTANA of Carrara.

Dante.

Cicero.

The fine mirror contributed by WALLER & KREPS of New York, placed at the extremity of the nave, has the effect of greatly extending its length and of reduplicating its numerous showy objects. Re-ascending the nave, we come to another of the many mantels to be found in the section. It is of variegated

Mirror.

Mantel piece.

- stone, and made by O. GORI of New York. Here, also, is a large church bell from Baltimore, and higher up the nave are several handsome bells from Troy.
- Bells.**
- Cotton rope.** A pyramid of cotton cordage is here a conspicuous
- Printed silks.** object, and a little further on, a case of Indian silks printed in this country.
- Venus.** A copy of the Venus of the Louvre, in marble ;
- A font.** a font in Normandy stone ; a statue representing
- Poetry.** "Poetry," by BRUNERI of Sardinia ; a plaster bust
- Bust of Scott.** of Gen. SCOTT, by JONES of New York ; an Italian
- CRAWFORD.** copy of the Apollo ; CRAWFORD's portrait-bust of his
- Diana.** wife ; and a copy, from Italy, of Diana of the Louvre, constitute the list of objects on the side line, and
- Mantels.** bring the visitor again among the marble mantel-pieces both of the Old and New World—two examples of the former being placed just out of the nave, in a recess of the centre. Passing these, we enter
- EAST NAVE.** the East nave, stopping for a moment only, to look
- Statue of Webster.** at the statue of Webster, modelled in plaster by CAREW of London, which occupies a place on the
- Mereury.** middle line. A copy of Thorwaldsen's "Mercury"
- Bells.** will be found on the left. A variety of bells, from MENEELY of Troy, are hung beyond the Webster ;
- Perfumery.** and still beyond, is Phalon's temple, dedicated to
- Locks.** soap and perfumery. On the left is a case of locks, exhibited by DAY & NEWELL of New York, some of them of elaborate and curious construction. Down's
- Gas-meters.** transparent gas-meter is an object of considerable attention to those who wonder how the amount of gas burned in any given place can be determined. The centre of the nave is here occupied by a number
- Life-boats.** of boats,—one of them a copper life-boat of thirty feet in length, capable of saving a great number of persons in shipwreck.
- The fountain.** At this point, the visitor may observe the "Crystal Fountain," but we propose to defer any description

of it until we enter the Machine Arcade, at a subsequent stage of our review. We will therefore cross the nave here, and ascend once more to the centre, Up the nave. noticing, as we pass, a group in plaster on a theme from Dante, by MUNROE of London; and another plaster group, representing one of the great Egyptian Ptolemies nourished in his infancy by an eagle, Ptolemy Lagus. modelled by JONES of London. A marble statue representing "TRUTH" recalls us here to the Italian Truth. sculptors. It is by CAMBI, and is followed by a charming model in plaster, by MARSHALL of London. It is entitled "The First Whisper of Love," and is The First Whisper of Love. one of the works distributed by the London Art Union.

Behind a small work in marble, from Italy, the visitor may notice CROLL's dry gas-meter, which Gas-meter. measured the gas consumed by 3,000 burners in the London Crystal Palace.

A group in marble representing "Charity," by Charity. BANDEL of London, and a Cupid, employed in the Cupid. mischievous work of piercing a heart, by SANTARELLI, bring us to the effigy, in armour, of an ancient English pikeman, and to the arms from the Tower of Pikeman, in armour. London, already referred to at some length.

The tour of the naves being now completed, the A pause. visitor may reasonably find a seat for a few moments somewhere beneath the dome, while we prepare to introduce him into the courts of the Palace.

DIVISION A.

UNITED STATES.

DIVISIONS. A GLANCE at the four mail-clad warriors, already referred to, will reveal to the visitor, beneath them, the letters A, B, C and D—indicating the four great divisions of the Crystal Palace. Division A, the north-east section, is occupied by the United States; Division B, the south-east, by Great Britain and Ireland; Division C, the south-west, by Belgium, France, and Germany; and Division D, the north-west, by Austria, Italy, Holland, the British Provinces, Denmark, Hayti, Cuba, and the United States.

COURTS. Each of these grand Divisions is subdivided into twenty-nine Courts, numbered alike in all, as a reference to the ground plan in the Official Catalogue will show. Court 1, Division A, opens from the North Nave, and into that we propose to conduct the visitor. The sight which meets the eye might create a degree of timidity in other circumstances; but here, the brazen-throated cannon are dumb, the swords hang innocently on the wall, or repose in their sheaths, and the stands of arms are not disturbed by the soldier.

**Military
appliances.**

We are in the Military Court, and amidst the arms and accoutrements of the U. S. Government. Here are mounted howitzers, a field casson with implements and equipments, and a field forge. These, with a battery-wagon in an adjoining court, consti-

tute a complete field-battery for flying artillery, and were manufactured at the Watervliet Arsenal. Field battery.

Here, also, are several large brass pieces from the Ames Company at Chicopee, (Mass.,) and upon the walls and counters of the court are regulation and fancy swords in great variety, from the same Company. Muskets and musketoons, from the arsenal at Harper's Ferry, may be compared with the similar arms used by the British army, and displayed in the tableaux of Division B. Cannon.
Swords.
Muskets.

Passing completely around the court, we enter, by the nave, Court 2, also occupied by numerous objects comprised in Class viii. of the Official Catalogue. Here are naval as well as military appliances, as we are reminded, at the very entrance of the court, by a miniature ship tossed upon mimic waves. All around are models of ships and steamboats and yachts. A case of fine guns and pistols, from KRIEGER of Philadelphia, and another of rifles, from RHODES, are followed by hulls and half hulls "too numerous to mention." A new steering apparatus, by HOBBS of Boston, stands on the floor of the court, and other capstans are there also, with rival claims. Beyond a full model of a sloop-of-war, and another of a river steamboat, the visitor may inspect a model of a new style of life-boat, not upon the Official Catalogue. It is a quadruplicate boat, for it is alike at the top and bottom, and having a double hull, it may be capsized with impunity. It is provided with removable decks, with abundant clinging ropes, and appears to be an invention of great merit. Mr. ALBERT BAKER, of Boston, its inventor, very courteously explains its peculiarities. Close by it, is another new and valuable contrivance, in Harding's Nautical Life-Bucket, which is also convertible, when empty, into a deck-stool. It is a simple contrivance, and exceedingly economical withal. Naval.
Models.
Guns and
rifles.
Hulls.
Ship steerer.
Sloop-of-war.
Steamboat.
New life-boat.
Life-bucket.

- Life-stools.** Tewksbury's patent life-stools, and other life-preservers, are also upon exhibition in this court. On the north side, among various models of vessels, is
- Clipper ship.** one of a full-rigged clipper ship. A case of beautiful
- Fire-arms.** fire-arms from Worcester, (Mass.,) models of top-sails,
- Ship's blocks.** and ship's blocks, of various kinds, bring us to the opening of the court, where is a large central show-case containing a great variety of military goods from HORSTMANN & Co. of Philadelphia. It is surmounted by a crest or plume composed of swords
- Military goods.** and banners. Two or three cases of percussion-caps
- Percussion caps.** are displayed at the edge of the court, and here
- Porter's rifle.** may be observed a case of Porter's revolving rifles. This rifle has a cylindrical box containing eight or nine charges, which, when attached to the barrel, revolves by means of the trigger, which caps and discharges the rifle by one motion. It may be fired with great precision *nine times in five seconds.*
- Court 4.** Just below the rifles, within Court 4, is a curious
- Whale gun.** object—a gun for shooting whales! In the same
- Whale lance.** case is a bomb-lance, for destroying the same sort of game. The visitor is now in front of one of the finest displays of pistols in the Exhibition. They
- Colt's revolvers.** are the world-renowned revolvers of COLT. Many of them are of exquisite and costly finish. Sharp's
- New rifles.** patent rifle, Whitney's percussion rifle and new patent revolving pistol, and a varied collection of fire-
- Fire-arms.** arms, some of them breech-loading and self-cleaning, from the Marston Fire-Arms Company, may all be found within this court.
- In one corner of it—the south-east—is a good
- Signs.** example, in great variety of styles, of sign-lettering, by BRANDON. The middle and north side of this
- Silks.** court are occupied by the few but showy silk fabrics of Class xiii. Most conspicuous, are the brocatelles
- Brocatelles.** of the Eagle Manufacturing Co., of Connecticut. They are displayed in the piece, and also upon a sofa

and a set of chairs, and will compare creditably with many of the foreign examples of furniture silks. The fringes and tassels exhibited by CROSSLEY, are heavy Fringes, &c. and of brilliant colours. A case of furniture silk brocades, damasks, and ornaments for churches, is Brocades. placed just out of Court 4, in another department. They are made by NEUSTADTER. Within the court, again, is a rich display of national ensigns—the stars and stripes, the meteor flag, and the tri-colour, gracefully blended. These are from WALKER & SON, of New York. Ensigns.

Passing towards the nave, we may notice an extensive display of balls of silk twist from GURNEY & Twist. Co., of New York, oiled silk from Philadelphia, and Oiled silk. a variety of silk manufactures from Newport, Kentucky. Here also is a case containing samples of raw silk from the manufactory of “Talabera de la Raw silk from Spain and China. Rayna,” near Cadiz in Spain. With these we should mention a case of China raw and thrown silks at the end of the court.

Our entrance into Court 4, is round a pyramid of Cotton spools. spools. containing coloured sewing-cotton, which introduces us to Class xi. of the Catalogue. This section will not detain the visitor long, unless it may be one who has a special interest in bleached and unbleached sheetings and shirtings, long cloths, Varieties of cotton goods. bed-tickings, gingham, or printed calicoes. It is, nevertheless, an important court, and contains very numerous specimens of improved cotton manufactures, from a dozen extensive mills. There are, among them, cloths and yarns from Southern factories which show that the producers of the cotton Southern fabrics. plant are becoming conscious of the facilities they possess for converting the raw material into fabrics. The north side of this court contains various examples of hemp and flax manufactures, such as sail Hemp and flax. cloth, shoe threads, ropes, and twines. There is also

Fireproof
cordage.

a specimen of what the inventor—Professor CARPENTER, of the Arkansas College—calls “apyritized rope.” This is hemp rope saturated with a chemical solution which renders it fire-proof, no questionable advantage, it will be granted by all.

Cotton duck.

Cotton sail cloth, or duck, is exhibited by the Boston Duck Company at the edge of this court, on the nave, passing which, and continuing on

Court 5.

beyond the staircase, we enter Court 5.

Here a totally different class of objects is found, referring us to Class xxvii. of the Catalogue. Beneath the stairs, upon the right hand, are numerous varieties of vitrified drain pipes from the Greenwich Pottery. Beyond them, are slates from Pennsylvania—school and counting-house slates from the Kittakinny Slate Company, and a small house beautifully roofed with slate of the Blue Mountain variety.

Drain pipes.

Slates.

Vitreous
clay.

Opposite to these, and surrounding the entrance to the Police Office, are numerous specimens of architectural ornaments in vitrified clay. Court 11, to the east, is fully occupied by similar works. On the right hand is another miniature house roofed with Vermont slate, and behind it, a beautiful display of columns, arches, mantels, and various objects in *ligneous marble*, by which is meant wood covered with a composition resembling marble. These are exhibited by FREUND & Co., of New York. Near by, are specimens of marbled iron, not dissimilar in appearance to the ligneous marble. There are also pedestals, columns, slabs, and other articles of silicious marble—also a composition—displayed by the Silexian Marble Company. Of these various and remarkable imitations of marble it may be remarked here, that they can hardly be distinguished from the most exquisite variegated marbles ever wrought. They are, moreover, durable and economical.

Slate roof.

Ligneous
marble.

Marbled iron.

Silicious
marble.

This court contains numerous displays of terra

cotta in its adaptation to architectural ornaments, Terra cotta. such as window and door caps, sills, lintels, columns and arches. Terra cotta, being a material of modern date, is not yet familiarly known to the public. It is a species of earthenware, composed of potter's clay, fine sand, and pounded potsherds, well mingled and put into porous moulds in the form of a paste. When the water is absorbed, the form is taken out and baked at a high temperature. YOUNG, ROCHE, and TOLMAN & Co. are exhibitors in this line, within the court, and from the window may be inspected further examples, erected outside the building, by WINTER & Co., of New Jersey:

Belonging to the same class, and now close at hand, are works in Scagliola, or cement, by FARLEY. Scagliola. Here also is a marble air-tight coffin from Baltimore. Marble coffin. Beyond this are centre-pieces, friezes, soffets, capitals, and other architectural ornaments in plaster, exhibited by several manufacturers. Plaster ornaments. A lyric centre-piece by HEATH of Philadelphia is highly ornamented.

Before dismissing this class, the visitor should inspect the lava-ware of Dr. SMITH, of Philadelphia. Lava-ware. These are bottles and vases made from the slags of reducing-furnaces—hitherto entirely waste material, but now promising to be of considerable worth.

The visitor has now reached Court 17, a triangular Court 17. space, of which the hypotenuse is a section of the glazed side of the building. Upon and beneath the table, stretching along this side and through Court 22, and extending also through Courts 10 and 16 south of 11 and 17 respectively, are found the multitudinous objects embraced in Classes ii., iii., and iv., of the Catalogue. Classes ii. iii. and iv. The singular, though perhaps unavoidable, admixture which obtains of chemical products, substances used as food, and raw materials, render it quite impossible to keep these classes distinct in this Manual.

Sugar and
tobacco.

Close to the north-east tower of the Palace stand, "cheek by jowl," sugars and tobacco. Of the former are several kinds, from the plantations of the Rev. Bishop POLK, and the Hon. E. E. KITTERIDGE, of Louisiana; and of the latter, samples of Kentucky growth.

Flour.

Indian corn.

Starch.

Sugars.

Preserves.

Mustards.

Flour.

On the right hand, as we proceed, are edibles, in the shape of Ohio flour, and various preparations of Indian corn from Yonker's Mills, New York. Potato starch may be seen close by. On the counter, again, are Texas and Louisiana sugars, made directly from the cane. Here are displays of pickles and alimentary preserves—tempting enough to make the house-keeper linger. Observe those delicious fruits preserved in glass jars hermetically sealed. They are from Delaware. Mustard, of different varieties, and by rival producers, presents itself to notice. Ranged all along beneath the counter are barrels, with little glass windows, revealing flour. Some of them are labelled "Flour," but give no visible sign thereof.

Wool.

Cotton.

Hemp.

Presently, among pickles, and spices, and cheese, and other edibles, we find samples of wool, and cotton, and flax. Of the former, BICKNELL has remarkable specimens,—locks of great length and fineness. Various other specimens will commend themselves to the notice of the curious in this line—particularly small samples of the wool of the Thibet shawl and Cashmere goats, raised in South Carolina by Dr. DAVIS. Of cotton, there are examples of sea-island and upland varieties,—distinctions obvious enough in the very names. A remarkable boll of cotton, containing sixteen locks, is exhibited by G. D. MITCHELL. There are various specimens of hemp from Kentucky and Missouri.

Meat-biscuit.

Hereabouts the visitor may pause to notice the meat-biscuit exhibited by BORDEN. This is hard bread, made of flour thoroughly saturated with the

extract of beef. It is pronounced by competent [DIVISION A.] judges to be highly nutritious, and took a council medal at London, in 1851.

Just beyond this is one of the most curious and attractive objects in these courts. It is an immense mass of alum, obtained by crystallizing a solution in a large cylinder. The height of the mass is not less than six feet, and its breadth perhaps five feet. The sides are nearly one foot in thickness, and the interior presents a fine display of immense crystals. Although this object is distinctly labelled "Alum," we observe that nearly every one tests it incredulously, and pays it the tribute of a wry face. This, and a great variety of chemicals (including large crystallized masses of the nitrate and sulphate of copper), stretching for some distance under the glass wall of the Palace, are the production of POWERS & WEIGHTMAN, of Philadelphia. Returning from a brief inspection of these, and other chemicals displayed in front of them, the visitor should pass closely behind and almost around the alum rock, along a narrow pathway between chemicals and raw materials. Those two pyramidal bottles, with stoppers crowned by gilded eagles, contain, instead of cider, as they seem to do, only refined linseed oil. Notice here that noble fleece which hangs behind them, whose story is legibly told upon the card affixed, and need not be repeated here.

Court 16 contains chiefly chemicals and drugs, as temptingly displayed as human ingenuity could contrive. Here are medicine chests, and all the paraphernalia of the *materia medica*; but we question if the visitor has a taste for ipecac, or jalap, or calomel, no matter how beautiful the bottle, or the box, in which the pill is displayed. Passing along the north side of this court we come to a case containing samples of stearine, of fleecy and waxy

High art.
Greek Slave
in stearine.

appearance. With a questionable appreciation of *high art*, the exhibitor has *done* the Greek Slave in this exceedingly plastic material, thus ambitiously displaying both his wares and his artistic *powers*. A pair of Caryatides, in the same material, is more in keeping.

Lard oil.

Samples, next, of lard oil limpid enough to burn well, are exhibited, from Cincinnati. This oil is obtained from lard by cold pressure.

Payneized
wood.

At the entrance of Court 10, is a stand upon which are exhibited various examples of Payneized wood, which is wood subjected to a process invented by Payne for rendering it comparatively indestructible. These specimens, which are very satisfactory, are from works established at Rochester, N. Y.

Wax.

Traversing the north side of Court 10—and passing a case of bright-coloured wax in many forms, and another case, containing what the juveniles may readily mistake for molasses candy, but which is only shellac bleached and coloured by ZINSSE & MARX—the visitor will be surrounded by objects of Class iii., excepting only, perhaps, a display of sperm candles. On the central table is an ingenious tableau of ears of Indian corn or maize, of more varieties than we had patience to count. There are various specimens of rice in the straw, from South Carolina; and upon the south side and the ends of the table, varieties of oats, wheat, and other grain, from California, Texas, and other productive regions.

Shellac.

Maize.

Rice.

Grain

Statuary in
sperm.

The north-east corner of the court affords further examples of the fine arts. Here are busts of Washington and of Webster in spermaceti, with backgrounds of candles! Is not this rather *making light* of sculpture? A mass of crystallized spermaceti here, is a very pleasing sight. The fig-paste of TATEOSYAN seems as if it might be good, but visitors must *not* find “the proof of the pud-

Fig-paste.

ding in the eating." We care not *a fig* for that.

Here and elsewhere in this court are to be found numerous bottles labelled "Sparkling Catawba," the produce of Ohio graperies. We cannot help pronouncing the wine "sour," and if any producer is aggrieved by our verdict let him make us swallow our words! The Catawba is said to resemble the Rhenish wines.

Transgressing the bounds of this Court, and trespassing upon the domain of cotton fabrics, is a barrel of polished black walnut wood said to contain flour.

Prominent among the substances used as food in this court is tobacco in every form. If any are disposed to cavil at the classification, so are we! But here it is in the leaf and in the lump. Cigars with gilded tips—made, we presume, to look at—rise in pyramids, and the air around is redolent of Oronoco!

Fancy chocolates, and vermicelli—the latter resembling straw braids—Hotchkiss's farinas, and Hecker's cereal manufactures, occupy the remainder of this court. Re-entering Court 16, on the right of the Payneized wood, we find ourselves surrounded by masses of brimstone, huge crystals of the prussiate of potash, camphor in layers, like those of jelly cake, Shaker oils and extracts, from Enfield, Conn., fine crystals of saltpetre, Hotchkiss's oils of mint and wintergreen, bronze powders from two manufacturers, ultramarine colours, Osborne's water colours, and various other articles of Class ii. As the visitor leaves this court he will notice a remarkable piece of a grape vine of Southern growth.

Passing out by the alum rock, and by the table occupied by Powers and Weightman's chemicals, notice beneath it a bale of the long moss peculiar to the South, where it drapes the trees of the low country as if with banners. It has been found to

Western
wines.

"Sour grapes."

Flour.

Tobacco as
food.

Edibles.

Brimstone.

Camphor.

Shaker oils.

Saltpetre.

Colours.

Grape vine.

Long moss.

be available for upholstering, and is an economical substitute for hair.

Refreshments. Our review has brought us to the door of one of the eating saloons, where, if so inclined, the visitor may rest a few moments, and obtain some refreshment, before entering upon a new class of observations. We have taken already a good many steps, and yet we have traversed but a small portion of the building. It will not be strange if fatigue should overtake many, long before one half of it is accomplished. It is to be hoped that such persons have more than a single day to devote to the Exhibition.

Just in front of the refreshment saloon, within Court 22, is a fine display of scales by FAIRBANKS & Co. These range from the capacity of counter scales to a platform capable of weighing 12,000 pounds. Their heaviest railway scales far exceed even the latter in capacity. Before leaving this point, the visitor may inspect and try the operation of Nock's "patent escapement tumbler lock," which is applied to a door for no other purpose than such a trial.

Scales. Beyond it are the mechanical lamps of Deucreux, and a case of steel trowels, innocent as yet of the sin of flattery, or plastering ! **Lamps.** WATTS's levels will attract the notice of those who like to make everything smooth, and the locks of the LEWIS LOCK Co. seem adapted to suit the fast men. Here are water-cocks, gas and steam flues, by GRIFFITHS of Philadelphia, and various other articles ; are they not all included in the chronicles of the Official Catalogue, at Class xxii. ?

Trowels.

Levels.

Locks.

Steam flues.

Entering Court 15, we find it occupied on the right hand by WINDLE & Co. with a display of household furnishing articles in formidable variety. Their platinised tin-ware, exhibited in a central show-case, deserves notice. Several water-coolers, ornamental as well as useful, from Baltimore, next present them-

Household appliances.

selves. Here, also, is an ice-cream churn, bearing Class xxii. the significant label, "Through in six minutes." It is also from Baltimore. Siedhof's atmospheric lamp presents a novel appearance; and close around and beyond it, are the lamps and chandeliers of Lamps, &c. DIETZ & Co. PATRICK's Defiance Safes cluster in the centre Defiance safes. of this court, while, upon the south side, CORNELIUS, BAKER & Co., of Philadelphia, make a most brilliant display of their lamps and gas-fixtures. To this Gas fixtures. house belongs the credit of introducing a new era in the line of their manufactures in America. The beauty and variety of their patterns, and the substantial elegance of their work, entitle them to distinction. Near by, the New Jersey Bronze & Plate Works make a fine display of gilt metal cornices Cornices. and mouldings. WALKER exhibits "patent safety lamps," in which (if in any contrivance) that dan- Gas lamps. gerous fluid, camphene, or spirit-gas, may be burned with safety.

Before reëntering Court 21, HOLMES & BUTLER's Bank Lock deserves a passing glance. Just within Bank lock. the court may be found sheet-brass, in rolls and Sheet-brass. plates, from Connecticut, and two fine collections of cabinet locks. Among the objects on the counter, Locks. are BROWN's patent self-heating iron, and ARNOLD's lantern and foot-stove combined. Approaching again the refreshment saloon, we pass a corner occupied by sundry cases of hardware, among which are fine brass and copper wire; two contributions of Brass wire. those useful little articles which disappear so mysteriously, and are called *pins*; superior tools for piano- Pins. forte makers; and tools of various kinds from the Ohio Tool Company. Last, but not least, is FLEIS- Ohio tools. CHEL's Electric Alarm Lock, a curious piece of mechanism, which it would be dangerous for a Alarm lock. burglar to tamper with—since, when improperly approached, it rings, by electric action, a loud alarm.

Class vii.

Arranged along the wall of the Palace, to the right of the saloon, and extending to the entrance of the Machine Arcade, are various objects, which the visitor may now, perhaps, conveniently inspect in their order. There is, first, an extensive variety of ornamental registers and ventilators for parlours, from two manufacturers. These contrivances are of modern date (since the era of grates and hobs, with the social delights inseperable therefrom), and are in keeping with the external elegance of the times. CULVER's collection is the more extensive ; but that of TUTTLE & BAILY is not behind in variety and beauty of design. Immediately opposite, are various other architectural contrivances, such as improved window sash, exhibited in three different models ; a new mode of shutting doors ; a new door-alarm ; and a model of a house, with OTIS's insulated lightning-rod attached. Hereabouts is a platform, covered with oil-cloth, upon which a dozen persons at once may be weighed, by the New York Scale Makers' Co., who generally have an obliging attendant at their compact and excellent apparatus, and who, by the way, is seldom idle. Continuing along the wall range, we find WOOD turning DOUGHTY's excellent specimens of sawed scroll and turned wood-work, such as stair-newels, banisters, brackets, &c. Close by, are the well-made and shapely oars of PAGE. Next to these, DORNBRACH exhibits models of a patent pine floor, put together without nails or visible joints, and highly ornamental in its appearance. Models of zinc roofs, and various applications of that useful metal to architecture, are displayed by LEROY ; and just beyond them are soap-stone furnaces, sinks, and stoves. Soap-stone, or *steatite*, is found abundantly in the United States, and is remarkable for its capability of resisting heat, upon which account it is used extensively in the construction of fire-places. Retracing a few steps, and

Furnace registers.

Windows and doors.

Otis's rod.

Scales.

Wood turning.

Oars.

Patent floors.

Zinc roof.

Soap-stone.

observing, as we pass, a variety of soda water drawing apparatus, of showy designs, by MATHEWS, and a collection of planished and japanned ware, exhibited by BERRIAN & Co., we reach a group of objects in Court 25. There is a large platform scale from St. Louis, exhibiting some novelty of construction. Two of LILLIE'S "impenetrable safes" stand close by; while very near are EMERSON'S ingenious ventilators, for the holds of ships. They are intended to take the place of the old funnel-mouthed cylinders of canvass, and have the great advantage of directing the current of air downward, no matter how the wind may blow. They are called "corresponding ventilators," two being employed—the one an injector, and the other an ejector. They were well received at the London Exhibition. There is a small model of the ventilators, to show their operation, by blowing upon the injector. A pyramid of packages exhibits the mode of putting up goods in New York for the interior of California. BUTTERWORTH'S burglar and powder-proof lock, reveals a system of interior works apparently complicated enough to puzzle the old Hobbs. It stands upon a Philadelphia iron safe, which is completely thrown into the shade by a mammoth and highly ornamental "Salamander" near by. It appears like a small house on wheels, and might be a *safe* retreat for not only the valuables of a bank, but for its officers thrown in. It is in striking contrast with an old, weather-beaten safe of Wilder's patent, which bears upon its defaced forehead the inscription, "\$100,000 preserved in this safe." The door is open now, and the money not there. It tells a tale of the past—of the great New York fire of November, 1851.

Soda-water apparatus.

Iron safes.

Ventilators for ships.

Bales for California.

Bank lock.

Iron safes.

An old safe.

In a corner of the same court, DARDONVILLE displays lamps, chandeliers, bronzes, &c. The lamps are of the famous Carcel order, in which the oil is

French lamps

Bronzes.

Class xxii. pumped up, drop by drop, to the wick, thus promoting and sustaining thorough combustion, and producing the finest oil light conceivable.

Court 20. While entering, at this point, into Court 20, the eye will be arrested by the sight of funereal trappings. RAYMOND'S metallic burial-cases, with their solemn drapery of black velvet, suggest grave thoughts. Of all the receptacles yet devised for the remains of the dead, these seem, to us, the least associated with repulsive ideas.

Carriage springs. At the right hand of the court are carriage springs, from New Jersey, and a further variety of hardware

Phoenix Safe. articles. The centre contains a Phoenix Safe, manufactured by HOLMES & BUTLER. One corner is occupied by SMITH & BRO. with an extensive assortment of household articles—from a mangle, or a roasting-jack, to a biscuit-roller or a tea-bell. Disregarding a piano-forte, which pushes itself into the western extremity of the court, and retracing a few steps, the south-west corner presents to view a collection of odd-shaped instruments, shining with japan black, lacquered brass, and silver plating, accompanied by huge steel shears. These are tinnern's machines, made by ROYS & WILCOX, of Berlin, (Conn.)

Tools for tinsmiths. Crossing the court, by a table covered with bars of cast steel, we find a case exhibited by ROCKWELL, where, besides patent files for newspapers, and patent save-all candlesticks, there is a handsome little mahogany bedstead, with two rosy-cheeked wax babies lying asleep and snugly covered by bedclothes, which, if they were ever so much alive and wakeful, they could not possibly "kick off," because they are confined by Rockwell's patent clasp. What a relief to anxious mothers, in the cold nights of winter, such a contrivance as this must be! Notice here a

Rockwell's patent clasp for bedclothes. new-fashioned carriage spring, exhibited by WRIGHT & Co.

Re-crossing the court, observe those long rows of merry sleigh-bells, whose tinkling music rings in the ear of memory, or suggests to the imagination scenes of wild frolic and fun among the white drifts of the winter. We are now in Court 19, and in front of us are polished steel squares and bright steel-headed hammers, the manufacturers of which are represented by DOUGLASS, of New York. A few moments may be well bestowed in the inspection of JACKSON'S bell telegraph, or "annunciator." It is the best system of communication between the chambers of a hotel and the office ever contrived. When the bell is struck from any chamber, a disc moves upon the dial of the annunciator, and reveals the number of the room. The disc is restored to its place by a crank, only when the summons has been answered.

Sleigh-bells.

Court 19.

Hardware.

Jackson's
annunciator.

This court is chiefly occupied by cutlery and edge tools. The table of knives and forks exhibited by GARSIDE, are noticeable for their handles of pearl and ivory, impressed with sharp and excellent medallions of various distinguished characters. Here are the sharp axes of SIMMONS & Co. Their case of miniature axes and hatchets delights the boys, and may well recall the story of 'George and his hatchet' to our recollection. While speaking of miniature specimens, we must not quite overlook a case of very small and highly finished knives and forks, scissors, and razors, which, it is conjectured, Mr. POOLEY designs for the use of the Lilliputians who are exulting over the captive Gulliver in the German department of the gallery. Appropriate to the collection, perhaps, but out of its class, is a knife-cleaning machine. The New England Cutlery Company exhibit a fine array of pocket knives, the largest of which measures, when open, *only nine feet*, and another, with half a dozen blades, might serve very well for the private use of Brobdignag. This Com

CUTLERY and
EDGE TOOLS.

Axes, &c.

Lilliputian
cutlery.

Large knives.

- Knife with 365 blades. pany displays a knife which contains 365 blades, a piece of ingenuity rivalled in kind only by the remarkable knife of Rodgers, in the English Courts. Here are highly polished shears for tailors, and a cooper's crose. Near by is a case of WALCOTT's graduated button-hole cutters, from the inspection of which we pass into Court 18, glancing, as we go, at a patent self-holding screw-driver. The remainder of the objects in Class xx. are now before us.
- Button-hole cutters. Here are saws and files in great variety exhibited by IBBOTSON ; pocket cutlery by SHEEHAN, and also a very fine display by the Union Knife Company of Connecticut. COLLINS & Co. make an effective show of their renowned axes, adzes, cleavers, and other formidable edged tools. Crossing the court at this point, the New York Knife Company claims a few moments' attention to their excellent display.
- Saws and files. It embraces pistol-knives, instruments of no questionable utility to the traveller in the backwoods. Look sharply here for a Lilliputian knife, a three-bladed instrument only half an inch long. In the next cases are neatly finished table knives from Connecticut ; tailors' shears from two manufacturers ; and, displayed in cases on the walls, is a brilliant variety of long augurs, whose convoluted forms remind one of revolving glass in mimic fountains. These, also, are from Connecticut, which is already noted for its superior cutlery and edge tools. They are followed by axes and sledge hammers. A case of highly polished and richly mounted cutlery by ALVISET, deserves more than a passing glance.
- Pocket cutlery.
- COLLINS'S axes.
- Pistol-knives.
- Tom Thumb's knife.
- Table knives.
- Shears.
- Augurs.
- Fine cutlery.

Throughout the middle of the two courts just inspected are distributed some furniture and pianofortes, which may be now advantageously noticed before we enter into the adjoining section. The piano just before us is made by McDONALD, and is provided with a new reed arrangement called by the

inventors the "Euterpean Attachment." It produces a full and pleasing tone. The next instrument is exhibited by HAZLETON & BROTHERS. JEAN LAUKOTA has a pianoforte in showy case, with keys of pearl and tortoise shell. Beyond it is a variety of chamber furniture in papier maché, made by WARD, and at the opening of the court is a very handsome suite of bedroom furniture in white enamel, with gilded decorations. The walls of these courts are hung with decorative papers from New Bedford, Mass., and from Philadelphia.

Euterpean
pianoforte.

Pianofortes.

Chamber
furniture.

Wall papers.

Our course is now by the nave into Court 12, which, with other courts, is occupied by furniture and musical instruments. The first object which presents itself is a billiard table, made by WINANT, flanked on the right hand by a magnificently carved buffet in oak, by BULKLEY & HERTER, and on the left by furniture of great elegance from DESOIR, among which is a book-case in rose wood, fit for a palace. A little further on, the centre is occupied by a sofa and set of chairs covered with rich brocade. On the left is a handsomely carved side-board by ROCHEFORT, and on the right, a handsome buffet from the manufactory of BROOKS; a beautiful piece of wood carving in alto-relievo, by PLASSMAN, and a very elaborate gothic book-case of carved oak, by BULKLEY & HERTER. The only objection to the latter is, that space is sacrificed to show. Two or three dozen of MESSRS. PUTNAM & Co.'s beautiful books occupy all its available space, while it would take-up the end of an ordinary library. This book-case introduces us to Court 13, further along on the east side of which is a group of furniture from Boston, among which are examples of well-applied ornament. There is a side-board, in black walnut, with elaborate carvings of game and fruit; a centre-table, and Siamese chair, also of walnut; and a library chair, converti-

Court 12.

Billiard table.

Carved buffet.

Book-case.

Sofa and
chairs.

Side-board.

Buffet.

Wood carving.

Carved
book-case.

Court 13.

Boston
furniture.

ble into steps. In front of these objects, a showy grand-piano, of carved rosewood, bearing the name of J. RUCK, maker, is mounted upon a massive and elegant billiard table, made by BASSFORD—an economy of space of doubtful advantage to either object.

Here a row of pianofortes stretches east and west. One of these is noticeable for its case of papier-maché, profusely ornamented with pearl and painting. It is exhibited, with another in a florid case of rosewood, by GROVESTEEEN. Across these instruments, we may inspect a group of articles in papier-maché, made by EVANS & MILWARD. Close by, are various cases of musical instruments, panels of painted woods, specimens of gilt mouldings, and “a new method of transposing the musical scale,” conspicuously displayed.

Passing westward, observe, on the left, a new description of violin—the invention of MOUNT, the artist. He calls it the “hollow back violin,” and claims for it superiority of tone to the convex-back instrument. BROWN exhibits a very handsome harp, by which are some guitars, from Pennsylvania. At this point, another beautiful billiard-table will turn the visitor’s steps northward. Yield not to the temptation to sit down in the “Turkish fautueil,” for the vigilant police will not allow you to touch its dainty covering of white brocade silk. Enter now the chamber decorated in *pierre carton* gilding, by THOMAS & BROTHERS. The work exhibits tokens of great haste, and lack of finish. Within, however, there is a magnificent pianoforte, in a case of mottled oak wood, with a richly carved plinth, made by WM. HALL & SON. Its tone is as superior as its finish. Here is also a very beautiful rosewood melodeon, by PRINCE. Besides these, there are choice specimens of furniture, by HUTCHINGS. Beyond this chamber is a handsome extension dining-table, in

Grand pianoforte.

Billiard table.

Pianofortes.

Papier maché.

Painted panels.

Gilt mouldings.

New violin.

Harp.

Guitars.

Fautueil.

Gilded chamber.

HALL & SON'S pianoforte.

Melodeon.

Dining table.

massive polished oak, by HOBE. Here may be seen a new style of bedstead, with pendulating berth or *shelf*, admirable for crowded hotels. Some rustic furniture, of twisted and gnarled branches, with the bark on, made by the Oneida Community, displays ingenuity and taste. A noteworthy object is an adjustable side-board, in oak. It is a pyramid of shelves, which may be depressed into an ordinary table. In this court are rich mouldings, by BLACK & GRAMM. Gallantry forbids us to overlook an arm-chair, displaying elegant embroideries in Berlin wool, by a lady. In returning, by the decorated room, into the region of musical instruments, we pass a case of violins which will repay the close attention of the amateur. They are made by GEMUNDER, who received a prize medal at the London Exhibition for a Quarnerius violin. NEFF displays, at this point, a quartette of stringed instruments. Beyond the billiard-table are clarionets, by LAUTER; accordeons, by RESCH; and banjos, by JACOBS. Next to these are clocks and mirrors, in neat and ornamental iron frames, from the Harlem Papier-Maché Works.

New
bedstead.Rustic
furniture.

Oak sideboard.

Mouldings.

Arm-chair.

Violins.

Quartette.

Clarionets.

Clocks.

The "Palace
Secretary."

The Palace Secretary, as its contriver calls it, is a showy piece of furniture, of a most comprehensive order. Without being of enormous bulk, it contains a bedstead, bureau, writing-desk, book-case, ward-robes, silver-closet, and sundry other conveniences—the whole being surmounted by a musical and alarm clock.

In this vicinity are viols and violins, of admirable quality, by MIRMONT; a melodeon, by GARDNER; flutes, by EISENBRANDT; and a musical novelty, in the shape of a keyed violin, invented by ROBERTSON, upon which it is professed a novice may learn to play with great facility.

Viols, &c.

Melodeon.

Flutes.

Keyed violin.

A line of pianofortes here stretches eastward; and in front of them, beneath a blue canopy, KING

Pianofortes.

Mechanical
chairs.

& SONS exhibit a group of mechanical chairs, for motion and locomotion. Among them is a very elegant one, somewhat ostentatiously labelled as "the chair in which the President sat at the opening of the Crystal Palace." Passing around the tent, we observe some elegant parlour chairs from Philadel-

Invalid chair.

phia; a patent invalid recline (which seems really well adapted to its purpose); a highly ornamented

Bedstead.

cottage bedstead, with floral decorations, from HART, WARE & Co., of Philadelphia. At the foot of it is

Self-rocking
cradle.

D. WALKER & Co.'s patent self-rocking cradle, a pretty and useful contrivance for the nursery. On

Elegant
furniture.

the right is a small court filled with rich furniture, made by ALEX. ROUX. A massive round table of polished walnut, and a carved side-board of the same, are particularly beautiful.

Court 6.

We pass now into Court 6, to inspect on the left a suite of chamber furniture, made by GSCHWIND. It is painted of a deep rich colour—the tables covered with warm-tinted marble, and the chairs with buff brocade. The drawers of this furniture open with a spring—a very unquestionable advantage.

Chamber
furniture.

Rustic chairs.

On the right is rustic furniture for gardens and arbours, made at Yonkers, by LACHOUME. Beneath

School desks.

the stairs is a variety of neat school-room furniture, and a neat sofa bedstead, of new construction, from

Iron furniture.

St. Louis. An ornamental iron bedstead, toilet stands, and chairs, are good examples of this style of chamber furniture, made by GILLIES. FORD's patent window blinds attract a good share of attention.

Window
blinds.

Pianofortes.

In the centre of Court 6 are two pianofortes made by HALLET, DAVIS & Co.—one of them a grand, and the other square, and both highly finished in rose-

Wall papers.

wood. Beyond these, and beneath the wall papers of GOLDER, of Philadelphia, are examples of a new style of decoration. It is an imitation of the French tapestries, by chemical painting on cloth or satin.

Imitation
tapestries.

The process is patented by the exhibitor, LEON JAROSSON. The chief painting represents the Discovery of America by Columbus, and is a showy and brilliant work.

Here we complete our survey of Division A upon the ground floor, and have reached the centre, at the point whence we started. From the seats just at hand the Amazon has a fine effect—or, Powers's statuary may reasonably claim a little more attention. The brilliancy which pours in through the eyes of the great dome is somewhat trying, after the subdued tone of the light in the interior courts of the Palace.

Court 6.
The end of
Division A.

DIVISION B.

GREAT BRITAIN AND IRELAND.

Court 1. ENTERING the Division occupied by Great Britain and Ireland, at Court 1, opening from the South nave, we are met first by a colossal bust of the late

Bust of Peel. Sir Robert Peel, modelled in plaster by JONES. Turning then to the left side, two of the famous double

Manton's guns. guns of MANTON will interest the sportsman, and at

Gilby's rifle. the same time he may inspect GILBY's rifle which loads at the breech. These objects are a little out of place in a section chiefly devoted to books and stationery, but they are not the only instances of the kind in this Division, where the space granted and the objects contributed are frequently not in proportion to each other. On the middle line of the court will be found, for instance, immediately behind the

Splendid book. bust of Peel, first, a magnificent volume entitled "Scotland Delineated," superb alike in its binding, in its typography, and in its artistic features ; and

Bray's harp. just beyond it, a double-action harp, in bird's-eye maple and gold, made by BRAY, of Dublin, and next

Oxford table. to this a very beautiful table, in papier maché, ornamented with views of Oxford. This is contributed

Palmerston. by SPIERS & SON. A bust of Palmerston, in marble, by THOMAS SHARP, of London, succeeds, and brings

Bohn's books. the visitor to a book-case which should be inspected in connection with one on the left side of the court. They contain the valuable contributions of Mr. BOHN, a prominent London publisher, whose name is known

to every bibliopole in the world. The central case contains treasures, in two volumes, in folio, of *Selby's British Ornithology*, and four volumes, in folio, of the pictures of the *Gallerie du Palais Pitti*. These are two only, of several valuable works. In the side case are complete sets of five of the most popular and admirable series of books accessible to the reader. They are denominated the *Standard, Classical, Illustrated, Scientific*, and *Antiquarian Libraries*, and embrace, altogether, nearly 200 volumes, in 12mo., of the choicest works in their respective departments. We have dwelt a moment on this collection because it deserves to be known to all who are collecting libraries, both for its great merit and cheapness.* Beneath a frame of fine typographic specimens from Sheffield, are various books from LUMLEY of London. GOODALL & SON's frame of playing cards exhibits a great variety of new and beautiful patterns. POL-LARD's envelopes seem to be of an infinite variety and of superior quality. Just beneath the stairs will be found samples of fancy papers from NEWBERRY of London, and a frame containing some remarkable specimens of chromo-lithography, being five illustrations, printed in colours, of St. Patrick's famous bell and its jewelled shrine.

Splendid
volumes.Popular
series.

Typography.

Books.

Playing
cards.

Envelopes.

Fancy papers.

St. Patrick's
bell

Advancing, at this point, into Court 7, the visitor

Court 7.

will find, facing him, a very attractive display of oil prints by the patented process of BAXTER of London,

Oil prints.

and near by is a smaller tableau, exhibited by DAVIDSON, the New York agent. Here are the excel-

lent black-lead pencils of BROOKMAN & LANGDON.

Pencils.

The centre of the Court is occupied by an extensive display of fancy stationery, and shell, pearl, and papier maché goods. Among them are many speci-

Stationery
and fancy
articles.

* Messrs. Bangs, Brothor & Co., of New York, are the agents of Mr. Bohn.

Court 7. mens of exquisite and ingenious workmanship. They are exhibited by BAINBRIDGE & Co.

Steel pens. The infinite variety of steel pens made by GILLOTT is illustrated in a corner of this court, and the curious observer will contrast the mammoth pen of three feet in length with those not longer than a barley-corn ! The entire range hence to the nave is occupied by English paper makers and stationers. **HOLLINGSWORTH** exhibits vast rolls of drawing paper showing the manner in which these fabrics are produced at the great mills. The display of stationery by **DE LA RUE & Co.**, of London, cannot fail to attract attention. Here are all descriptions of ornamented papers, envelopes, and visiting cards ; beautiful *papeterie* ; playing cards, exquisitely embellished ; fine morocco cases of various kinds ; gelatine papers, and a long catalogue of other articles. The most novel portion of their whole display

Papers.

DE LA RUE'S
stationery.

Pearl-tinted
Envelopes and
iridescent
papers.

are the pearl-tinted envelopes and iridescent films for ornaments. These are produced by the action of light upon extremely attenuated films of varnish or oils. The splendid colours seen upon a vanishing soap bubble are actually caught and made permanent upon paper. A drop of oil or varnish will spread itself over a considerable surface of water, producing there exquisite tints. By carefully drawing a piece of paper through the film, the rainbow hues are taken prisoners, and somewhat in this manner are the iridescent tissues of paper obtained.

Captive
colours.

Cloths for
bookbinders.

Bookbinders' cloths, or muslins, of all the gay colours and patterns we see upon modern volumes, are exhibited, by two manufacturers, in this court.

Court 2.

British
textiles.

Reaching Court 2, by the nave, we are at once among the textile fabrics of the United Kingdom, which extend through Courts 2, 3, and 4, fronting upon the nave, and also 8, 9, and 10, immediately

Double courts. beyond them. The first two of these double courts

are, for the convenience of exhibitors, bisected, and the visitor, in passing around them, must look both on the right and left hand. Unless we enter into a full explanation of the processes of weaving, bleaching, and colouring the various fabrics of wool, cotton, flax and silk, which we shall find distributed through these courts—a history which would be out of place here—there is very little for us to say concerning them. Our review, therefore, will be only a rapid generalization. In the first section we find ourselves between showy damasks and table covers, on the one hand, and brocatelles and worsted fabrics on the other. The beautiful poplins and paramattas of MIDDLETON & Co., and the brocatelles and brocades of GROSVENOR, will detain the *fair* visitor a few moments, while the gentlemen will probably turn rather to inspect a fine display of piano felt-cloth in all its varieties and forms, from the Wandle Felt Mills, or linger to admire the richly embroidered vest patterns of HAYWARD, the fine cloths exhibited by SYKES, and the cloths and cassimeres of BULL & WILSON. In this section are fine and comfortable shawls from two or three exhibitors. The extremity of the line is occupied by an extensive variety of woollen fabrics of the coarser description, and here may be found a great display of woollen yarns. The southern section of the court displays on one side woollen, and, upon the other, cotton, linen, and mixed fabrics. Among the former are some superb buffalo cloths and beavers, made for STEWART & Co., of New York. The broadcloths of YORK & SHEEP-SHANKS are excellent examples of English woollen fabrics, while the tweeds and fancy woollens of BROWN & Co., and of WILSON, show the merits of Scottish manufactures. On the other side are some specimens of the excellent Wisbech cotton sheetings, and *over* them, as appears perfectly natural, are

Courts 2
and 8.British textile
fabrics.

Damasks.

Brocatelles.

Poplins.

Piano felt.

Vestings and
cloths.

Shawls.

Woollens
and yarns.

Buffalo cloths.

Broadcloths.

Scotch cloths.

Sheets and
blankets.

EARLY's fine Witney blankets of English wool. The linen fabrics in this section are chiefly of the heavier kinds, as table cloths, sheetings, and towellings, and are all British manufactures. One fine table cover displays the arms of Queen Victoria in damask. Approaching the nave an extensive display of Irish poplins is made by the brothers PIM of Dublin. Here are single and double, watered and gold modern and antique, plain and fancy poplins, and other mixed fabrics of fine quality. Just opposite are CARR's patent beaver cloths, impervious to rain, and at the edge of the court, behind the statue of Sabrina, the visitor may see not only the wool of these cloths in every stage of the manufacture, but also a pleasing illustration of their impermeable nature, a basin of cloth filled with water in which toy fishes are floating.

The next section (Courts 3 and 9) is occupied almost exclusively by the manufactures of flax for which Great Britain, and especially Ireland, is famous. The manufacture of linen was commenced in Ireland in 1624, and at the present time her looms yield perhaps the finest specimens anywhere produced.

In FENTON & SON's cases are specimens of the flax plant, and of flax in the various stages of its manufacture, and also of exceedingly fine threads. Here, also, may be inspected linen fabrics of every texture, and in most varieties. An extensive display of fine table cloths, of single and double damask, is also made by RICHARDSON, SONS, & OWDEN. The fine fabrics of GIBON & SONS extend on both sides of the partition wall in Court 9. At the upper end is a very large assortment of linen threads, and, near them, all descriptions of coarse and heavy linen fabrics. The visitor will notice, in passing towards the nave, the fine damask, silk and linen, and richly printed woollen table cloths of DEWAR & SONS. The

opposite side is occupied by DUNBAR's linen threads Linen threads. in immense variety, and by fine linen fabrics from DUNBAR, DICKSON & Co.

On the left hand of Courts 4 and 10, is a fine display of Jacquard figured silks, such as brocades, Jacquard silks. silk tissue and brocatelles, suitable for upholstery. Brocatelles. These are exhibited by HOULDSWORTH & Co., of Manchester, and constitute the principal feature of this section. Here may be found a case of beautiful crape and areophane fabrics from COURTAULD & Crape goods. Co., of London, and another of silk plushes from Silk plushes. BOOTH & PIKE. The latter are used principally in the manufacture of hats and bonnets. HALL & NICHOLS, of London, display every variety of silk Trimmings. trimmings and sewing silk.

Upon the south side of Court 4, are displayed contributions from Sweden and Norway. These, SWEDEN AND NORWAY. though few in number, are not without interest to the visitor. There are specimens of Vasa-rye, native Vasa rye. nickel, soap, and excellent stearine candles. The Candles. principal objects, however, are wood carvings by Wood carvings. the Norwegian peasantry, of which there are numerous beautiful examples. Here, also, may be seen specimens of salt, oil, vinegar, and sabots, from Por- PORTUGAL. tugal, and, in close companionship, candles and soap from Spain. SPAIN. Some of the candles are curiously embellished.

The next Courts, 5 and 11, are occupied by a large variety of stone and terra cotta ware, at present in most admired disorder. Here may be seen the pedestal of a huge Warwick vase, the latter, unfortunately, broken beyond repair, we suppose in its transit from the Old World. Here are fire bricks of all kinds ; drain bricks ; drain tiles ; roofing tiles and gutters ; all sorts of architectural ornaments in terra cotta ; water filters, vases, and jugs, of enamelled stone. A great variety of these articles are from Stone ware and terra cotta.

the Lambeth Pottery of DOULTON & WATTS. There is one immense stone jar, to lift the cover of which is a tax upon one's strength. Without positive information, we can only conjecture that this is modelled after the famous oil-jars in which the forty thieves were so neatly boiled to death by Morgiana, in the era of the Arabian Nights !

Printing
Telegraph.

In this section is one of the stands of House's Printing Telegraph, of which we shall have something to say when we reach the other stand in another division.

Elbow room.

Classes
ii., iii., and iv.

Passing beyond the region of pottery, the visitor will find himself in Court 17, where there will certainly be no complaint of being crowded. Around, and before us, stretches a space only partially occupied. All along the side windows of the Palace—through Courts 17 and 22—are displayed, at intervals, the objects embraced in Classes ii., iii., and iv., of Great Britain and Ireland. The appearance of this department is by no means imposing, though there are a few very remarkable contributions. Let the visitor glance at them, even up to the door of the southern refreshment saloon.

Gelatines.

Archil and
cudbear.

There are some fine specimens of gelatine in pastes, sheets, and shreds, as, also, of British isinglass. These are followed by specimens of archil, and cudbear, and lac dyes. Archil and cudbear are produced from numerous lichens by steeping them in ammoniated solutions, and they are extensively used in dyeing textile fabrics. They yield all shades of violet, blue, crimson, and chocolate colours.

Rich sauces.

Here are specimens of Royal Osborn Sauce, and upon a table, near at hand, is a large display of the famous Worcestershire Sauce of Lea & Perrins. Besides these, there is the Camp Sauce of Somersetshire, and mushroom spawn—all of which are esteemed exquisite condiments by *bons vivants*. In

the same category are mustards here exhibited. Mustards.
 Curious objects are the principles of aloes and coffee,
 respectively termed aloin and caffen, and exhibited Aloin and
 by SMITH, BROTHERS. They display exquisitely fine caffen.
 crystallization. Beyond these are numerous large Crystal
 crystals of copperas (sulphate of iron), and they are masses.
 followed by a very interesting display of British in- British plants.
 digenous plants, ingeniously preserved by KENT. The
 mineral colours exhibited by ELLAM, JONES & Co. Mineral
 are numerous and brilliant; and the chemicals of colours.
 HOWARD & KENT appear to be of exceedingly fine Chemicals
 quality and of great purity.

Retracing now our steps into Court 16, we may Court 16.
 pause awhile before the grand tableau of English
 seeds and productions exhibited by NOBLE & Co., English seeds.
 of London. Upon the walls are coloured drawings
 of astonishing turnips, wonderful beets, and carrots Mammoth
 which might pass for golden walking-sticks if they vegetables.
 were not so stout. Beneath them are innumerable
 specimens of seeds, capable of growing into the
 realization of the pictured wonders above, and all
 other descriptions of vegetables. What a sight is
 this for vegetarian societies! They should vote a
 gold medal to the exhibitors if they could possibly
 fail of obtaining one from the jury. Tribute due.

In the vast void around us here, we may discover
 three cases of preserved English flowers—two of English dried
 them botanically arranged, and the other for decorative flowers.
 effect, but all with great care and taste.

A considerable amount of space is devoted in this HARDWARE.
 Division to hardware, under which generic term the
 Catalogue includes wrought iron in every form, and
 all brass and pewter articles. This is, of course, a
 wide range, and brings together objects that are
 vastly dissimilar. The anvil of the blacksmith, or
 the sledge with which he plies it, is in striking con-
 trast with the polished needle, or the slender watch- Differences.

Class xxii.
Court 15.

spring. There is a vast difference between the iron tea-kettle, and the tea-urn of planished tin ; or between the brass fire-irons, and the superb chandelier. In this class, therefore, extremes meet—the rude and elegant, the cheap and the costly, stand side by side. The difference is entirely artificial ; it is the result of human ingenuity and human labour, here beautifully illustrated. Iron, the coarsest of all the metals,

Value of iron.

estimated by the importance of its relations to human industry and progress, is the most precious of all. It is one of the greatest elements in the prosperity of a civilized people, and it is not surprising that it is one of the chief features of the British department. Entering Court 15, we pass a stand

Boiler tubes.

of iron tubing, described as *lap-welded* tubes, a name which indicates sufficiently the manner of their construction. Passing to the left, we find a truly

Cutlery.

magnificent display of cutlery and edge-tools by TURNER & SON. Here are mammoth examples of

Great carver.

the pocket-knife and razor, and a remarkable carver and fork, the handles of which are immense antlers of the stag, highly polished. The beauty and *variety* of this display is scarcely surpassed. Those minute but important specimens of iron manufactures, pins, needles, and fish-hooks, are here extensively and ingeniously displayed. An eagle, formed of fish-hooks, is certainly a novelty ; and beside it, we find stars and plumes of needles. The name of one of the manufacturers is also pointedly delineated in needles.

Pins and
needles.

Fish-hooks.

Low Moor
Iron Work.

The contributions of the Low Moor Iron Company are varied and interesting. They include specimens of iron in every stage of its manufacture, together with the coal and coke employed in its preparation, and examples of wrought iron subjected to immense power. The sign of this Company is a sheet of rolled iron, twenty feet in length, five in breadth, and nearly an inch in thickness—the *largest*

Immense
plate of iron.

plate of iron ever rolled. Here may be seen a tire Court 15.
of a locomotive driving-wheel, bent cold, and nume- Bent iron.
rous examples of immense round rods of iron *tied*
into knots when cold ! Knotted bars.

Just opposite, is an extensive display of brass hardware, by SIMCOX, PEMBERTON & SONS, of Bir- Brassware.
mingham. The collection embraces all descriptions of cabinet work, in brass, and in glass and china, with *brass* mountings, of which there are here displayed many novel and beautiful specimens. Curtain cornices and decorations, in brass, are produced by pressing or stamping sheet brass with steel dies ; Curtain decorations.
and great elegance has certainly been attained in this branch of ornamental work.

The application of galvanized tinned iron sheets Tinned iron
to roofing, and the construction of gutters, pipes, for roofing.
&c., is here largely illustrated. The material being corrugated, combines great strength with lightness, and is not only fire-proof but rust-proof.

At this point we may notice a case of stirrups and saddlery hardware, exhibiting a variety of Stirrups of
patterns, and intended for both home and foreign all countries.
markets. Some of the styles of bits and stirrups are grotesque—the latter with immense spurs. These objects are all richly plated with silver. Saddlery hardware forms quite an item of the manufactures of Birmingham and its vicinity. To the left of this case we notice BROWN'S Conical Buffer-Spring, for Buffer spring
railway carriages. It consists of a cylinder, in which for railways.
a spring piston is fitted, and its utility consists in its power to counteract the shock arising from the stoppage of a train upon the rails.

The files and rasps of MARRIOTT & ATKINSON are Files and
of various patterns and fine finish. Crossing, here, rasps.
to the opposite corner of the court, we observe the fine display of rasps, files, and edge tools, made by TURTON & SONS. In connection with these, it is

Prepared steel. interesting to notice the bars of steel tilted and rolled for their manufacture.

Saw plate. Passing southward, we find a corner of Court 14, occupied by an immense circular plate of steel. It is nearly seven feet in diameter, and is designed for a circular saw. This, and long sheets of steel for cross-cut saws, and various specimens of fine wrought steel, are exhibited by JESSOP & SONS, and add to our already numerous examples of Sheffield manufactures.

Chandeliers. Beyond these, is a fine display of chandeliers from Birmingham, of elaborate workmanship applied to several highly artistic designs. On a centre table, at the right hand, there is quite a variety of objects, among which are gutta percha skates, a new mining Miner's lamp. Locomotive reverser. lamp, an ingenious plan for reversing locomotives on railway tracks, specimens of iron rails, of different kinds and calibres, files, and prepared steel.

Tin ware. Opposite to these, is a large variety of planished tin ware, and general household utensils; leaving which, upon the right hand, the visitor may pass into an Eastern court to inspect the remainder of the British hardware. A case of machine wires, used in the Machine wires. manufacture of paper, is exhibited at this point. Here, too, are found iron chains of immense size, adapted to mining purposes, and to form the cables of the largest ships; and, behind them, more lap-welded Lap-welded iron tubes. tubes for steam boilers, and wrought iron in a hundred different specimens.

Novel gas burners. THORNTON & SONS exhibit curious brass candlesticks and gas burners, with a collection of kitchen utensils. Among the latter, may be found a patent Patent roaster. roasting-jack, with self-acting baster and reflector. This is the invention of a lady. An improved variety of steel wire, for musical instruments, may be seen Steel wire. opposite to a frame of lap-welded tubes, of all sizes.

Ordnance map of Lancashire. Displayed upon the wall space of this section, is a magnificent Ordnance map of Lancashire, one of the

contributions of the British Government. Two cases of bright steel instruments, which might easily be mistaken for bayonets, are, on the contrary, emblems of peace, being spindles and flyers for spinning machinery, made by PRESTON, of Manchester.

Spindles and
flyers.

The visitor will pass, here, to the inspection of a mantel-piece, a font, and tables, made of Derbyshire marbles, which are all examples of carboniferous limestone, and exhibit various colours, according to the metallic oxides with which they are combined. The black marble is very beautiful, and is much employed. The specimens of inlaying, or mosaic work, here exhibited, by TOMLINSON, of Ashford, are exceedingly beautiful. An immense and attractive variety of vases, cups, and other articles, in Derbyshire marble, is displayed to the very verge of this section, upon the East Nave. The British Ordnance maps of Wigtonshire, and Dublin, overhang these objects. Along the centre of the section, SUTCLIFFE, of Birmingham, displays tables, screens, trays, cabinets, and other objects, in papier maché, and japanned work. The opposite side of the court is occupied by tables, vases, and numerous other objects, in plain and mosaic Derbyshire marbles. The fluor spar, (fluuate of lime,) commonly called "Blue John," is an exquisite variety of these stones, and is highly esteemed for its fine colour. The wall of this section is hung with the splendid Ordnance map of England and Wales.

Marbles of
Derbyshire.

Black marble.

Mosaic work.

Ordnance
maps.

Papier maché
and japanned
ware.

Fluor spar.

Map of
England and
Wales.

Upon the same table with these vases, are some fine septarias; two chess-boards, of mosaic marble; a table-top, ornamented with illustrations of Shakspeare's Seven Ages, in chromo-lithography; and two concertinas. The concertina is a very sweet instrument, of the accordeon kind, deficient, however, in forzando effect. At the edge of the court, may be found a new system of railway signals.

Septarias.

Chess-boards
in stone.

Concertinas.

Railway
signals.

Machinery. Leaving the machine courts of this division to be inspected in connection with the Machine Arcade, we turn our steps westward.

Furniture courts. Courts 12 and 13, form a section occupied by furniture and pianofortes. Entering from the nave, we find a group of the latter just before us—comprising a grand, square, and upright—from the manufactory of STODART & Co., of London. They are chaste examples of English walnut furniture, in the Louis Quatorze and Elizabethan styles.

Stodart's pianofortes. Upon the left hand, are specimens of wall papers, with illustrations of the manner of printing them from successive blocks. Upon the opposite side of the court is another display of printed papers, for decorative purposes—embracing several elegant patterns

Wall papers. —from SOLOMON & HART. The papier maché furniture, and other articles, exhibited by JENNENS & BETTREDGE, will next attract the attention of visitors. They are numerous, and of remarkable beauty. This house is celebrated for its papier maché fabrics, and holds a patent for a superior process of inlaying with mother-of-pearl.

Papier maché furniture. The manufactures of papier maché are so numerous, and so generally diffused, that some account of the methods employed may not be without general

Papier maché, how made. interest. Common papier maché is nothing more than pulp of paper pressed dry and hard in moulds. The superior quality is made by covering a frame or model with successive layers of porous paper, which are allowed to dry and harden. The article is then

Polishing. covered with varnish, which is polished with rotten-stone, and, finally, with the hand, to give it a high finish. It is then ready for the pencil of the artist.

Prominent among the contributions under notice, is a very beautiful easy-chair, not inaptly called “The Day Dreamer.” It is decorated with figures and emblems illustrative of sleep and dreams. There

“The Day Dreamer.”

is also a *tete-à-tete* lounge, various exquisite tables, and, in the south end of the section, a variety of cabinets, boxes, inkstands, &c. The centre of the section is occupied by a remarkable display of furniture by MORANT & BOYD. There are numerous tables, two of which are worthy of particular notice. One of these is called "the Swan table," and the other "the Stork table"—names, the fitness of which will be apparent when they are seen. The latter table has a top of painted glass. There are also console tables, cabinets, jardinières, screens, and tripod stands.

Tete-à-tete
lounge.

Tables, &c.

Elegant
furniture.

Swan table.

Stork table.

Cabinets, &c.

They exhibit, beside these, a specimen of interior decoration in the elaborate style of Francois I., and illustrative of both the pictorial and plastic arts. There is, on the opposite side of the court, a beautiful cabinet of zebra wood, the panels of which are painted with four illustrations of woman's history. Messrs. ARROWSMITH are the makers and exhibitors. The "Shamrock Table" is an object of interest, being constructed of thirteen of the rarest Irish woods. The centre represents an Irish harper.

Interior
decoration.

Cabinet of
zebra wood.

"Shamrock
table."

Behind a collection of papier maché, and fine japanned articles, is a large mirror, displayed in a frame of carved wood, which is one of the most remarkable works in the Palace. The whole frame is composed of wreaths of flowers and grapes, executed with a wonderful grace and freedom. It is the work of Mr. ROGERS, of London, who has several other exquisite examples of wood-carving on panels and cups in the Exhibition. His works are very highly esteemed in England, and fully revive the rare degree of excellence displayed in the art, by Grinling Gibbons of another age.

Mirror frame
of carved
wood, by
ROGERS.

Exquisite
carvings.

Before leaving this court, the visitor will notice a truthful and finely-chiselled bust of Jenny Lind, by DURHAM, and a statuette, in marble, represent-

Bust of
Jenny Lind.

Statuette. ing "Olivia raising the veil," by KIRK of Dublin.

Altar-piece. Passing out of this section to the eastward, by a carved altar-piece, with exquisite painting of the Madonna, the visitor enters the department of cutlery, in front of a marble bust of Daniel O'Connell.

Daniel O'Connell. The beautiful steel manufactures of Sheffield are here displayed in profusion. The exhibitors seem to have vied with each other as to who should produce the most beautiful effect with his manufactures.

Sheffield manufactures.

Edge tools. First, are the edge-tools of HOWARTH, with a mammoth chisel, elaborately ornamented. In JACKSON'S case (just opposite) is a giant razor, as the exponent of the sharp instruments around it. The visitor will notice some large and highly-polished plates of steel.

Great razor.

Steel plates. They are engravers' plates ; and among them is one *ruled*, as it is termed—a process performed by machinery, and producing the fine lines seen in the upper part of a steel engraving. HARGREAVES next displays a splendid assortment of knives, razors, scissors, and fine tools, and is followed by MARSH & BROTHERS with an array fully as beautiful.

Machine ruling,

Fine cutlery.

At the edge of the court, upon the nave, are two busts, in marble, the one of O'Connell, and the other of Father Mathew, both executed by CHRISTOPHER MOORE, of London. Between them, is a case of beautiful pocket-knives. Upon the opposite tables and wall space, are exhibited further specimens of cutlery ; also, needles, crochet-needles, stilettoes, percussion caps, and fishing tackle. Near by, is an upright case, in which are displayed, behind magnifying lenses, fine hairs, perforated, and threaded into themselves. These are exhibited, by a needle manufacturer, as examples of the delicate process of making needle eyes.

Busts of O'Connell and Father Mathew.

Cutlery.

Needle eyes.

Imported cutlery and sporting accoutrements.

In another section of Court 6—which may be entered at this point—are extensive displays of fine cutlery, guns, ammunition, and sporting accoutre.

ments, both by manufacturers and importers. The last object to be observed in this department, is a magnificent sportsman's knife, made by RODGERS & SON. The handle is twelve inches in length, and it contains eighty blades, and other instruments. Upon one side of the handle, which is of mother-of-pearl, is embossed, in alto-relievo, the boar hunt, and, upon the other side, the death of the stag. The blades are etched with views of English and American cities. It is a very remarkable piece of workmanship, and justly attracts much admiration, as it did also in the Crystal Palace at London.

Rodgers &
Son's sports-
man's knife.

Here we complete our review of Division B., and must now cross over to the south-west division of the Palace.

End of
Division B.

DIVISION C.

BELGIUM, GERMANY, AND FRANCE.

BELGIUM.

Division C,
Court 1.

Fire-arms.

Percussion
caps.

Military arms.

Rifles.

More
fire-arms.

Court 7.

GLANCING the eye upward, to the point where the South nave merges into the centre, the Belgian colours will be recognized, and, passing beneath the flag, to the left of FRAIKIN's fine model of a Psyche, we stand within Court 1, of Division C., which, together with its subsequent Court (7,) is occupied by the contributions from Belgium. We are in the midst of arms, and ammunition, from various contributors. The stand of double-barrelled guns, and pistols, at the edge of the court, is exhibited by FALISSE & TRAPMANN, of Liege. The long showcase, within the court, containing, besides numerous pistols, every description of percussion caps, and their corresponding nipples, and another stand of military arms, still beyond it, are also from these exhibitors. Among the military arms, are Russian, Swiss, Norwegian, Prussian, Belgian, and Spanish guns. A stand of rifles must be included with all these, making the most extensive assortment of arms contributed by any foreign manufacturer. The left hand side of the court is entirely occupied by guns and rifles, and gun hardware, exhibited principally by PETRY, of Liege. SCHEPERS, and L'HONNEUX, both, also, of Liege, exhibit a variety of guns, near the entrance of the court.

Proceeding into Court 7, we encounter an immense variety of brushes, for every conceivable

purpose, from SOMZÉ-CADET, of Liege. Here are Brushes, house brushes ; railway brushes ; long cylindrical brushes for cloth manufacturers ; military brushes, and door-step brushes. At the end of this large collection is a tempting display of loaf and crystalized sugars from Ghent. The centre of the court is occupied by glass and earthenware. In a recess, to the right, is an extensive display of spikes and nails.

In the extremity of the court are curious cloths of aloe-fibre, of two surfaces, some of them apparently interwoven with silk. They are used in the same manner as horse-hair cloths for furniture. Displayed, at some height upon the wall of this court, are tapestry carpetings from Tournay ; fine specimens of varnished leathers from Brussels ; muffs, pelerines, and natural furs, from Ghent ; while below these, and upon the tables, are woollen shawls and dress fabrics from DE MOORMUYS, of Lookeran, and mixed wool and cotton stuffs from SCHMIDT & Co., of Brussels. Upon a table, near by, are displayed samples of chemical colours, purified rape-seed oil, and starch.

In another corner of this court are neat and substantial-looking carpets, made of cow-hair ; hemp canvas, of immense width ; and excellent blankets—the latter a portion of the woollen fabrics contributed by DE KEYSER, of Brussels, and chiefly displayed in Court 1.

As we re-enter that court, we may notice a curious apparatus for watering all descriptions of grain, extensively used in Europe. Just within it is a collection of volumes, printed and illustrated in Brussels, and exhibiting both typographic and artistic excellence.

Some fine cloths, manufactured by SIMONIS, at Verviers, may be noticed here ; and a little further

Sugars.

Glassware.

Nails and spikes.

Aloe-fibre cloths.

Tapestry carpetings.

Leathers and furs.

Woollen fabrics,

Chemicals.

Cow-hair carpets.

Broad canvas.

Blankets.

Grain moistener.

Printed books.

Fine cloths.

Lace fabrics. on, occur the lace fabrics of Brussels, renowned all over the world for beauty. Those of SOPHIE DUFRENNE are particularly beautiful, including a handkerchief valued at \$500. The ladies may notice as attentively as they please, the "nymph corsets" of Mme. BURGER. JELIE, of Alost, exhibits fine linen threads. A slab of polished black marble, curiously engraved, by leaving the design in relief, is a good example of stone-cutting.

A principal object of interest in this department is the musical table of LACROIX, from Verviers. The mechanism is hidden beneath the marble slab, and is wound up like an ordinary musical box. Hanging at the entrance of Court 7, and well seen from the piano-table, is an elaborate mirror frame, cast in bronze. Belonging to Belgium, but exhibited near the Machine Arcade, where we shall by and by encounter it, is a stocking knitting machine, invented by JACQUIN, of Brussels.

Our view of Belgium thus completed, we pass under the flag of the Zollverein, and, entering Court 2, the woollen fabrics of Germany are spread out before us. Before inspecting them, we may observe some pleasing examples of bronze castings, from GEISS, of Berlin. They are two small works—the one a boy, and the other a girl, playing with a dog. Another bronze statuette represents a girl with a parrot, by VOLLGOLD, of Breslau. Just above this work is a marble bust of Queen Victoria, by CARL BARATTA; while, on the table below it, are samples of hunting percussion-caps from Wurtemberg.

With these exceptions, the entire court is occupied by Prussian and Saxony cloths in great variety, and from such a number of exhibitors, that to name them would make our summary a catalogue. This is rendered needless by the showy display of the manufacturer's name and address upon each different contri-

bution. A few moments will suffice for the visitor, not specially interested in satin cloths, cassimeres, drap d'été, and merinoes, to survey the court. Passing around into Court 3, some guns, and an extensive display of percussion caps arrest the eye. Above these is BARATTA's marble bust of an Amazon.

Zollverein
manufactures.

Court 3.

Bust of
Amazon.

The visitor may here, if so inclined, notice more closely the beautiful groups and pedestals of Berlin iron, mentioned in our view of the south nave. The delicacy and beauty of the Berlin iron castings, are attributed to the presence of phosphorus in the bog ore from which the iron is obtained. All efforts to produce equal works with other iron, have proved vain.

Berlin
iron-castings.

Court 3 contains velvets, silks, and fine worsted fabrics, which, however, afford us little scope for description. There are upwards of one hundred exhibitors, from the German States, in the five classes which comprehend textile fabrics—cotton, wool, silk, flax, and mixed goods. There are two examples in this court of pictures woven in silk. One represents a tablet, on which is inscribed the last will of King Frederick III., and the other is the Grotto of Neptune—both curious and ingenious works. Perhaps the most extensive display of silks, velvets, and stamped ribbons, is that of MENGHIUS & BROTHER, of Aix-la-Chapelle.

Textile goods.

Pictures
woven in
silk.

Silks,
velvets, &c.

We enter Court 4 among the fine castings of GEISS, of which we find two examples not included with those of the nave. They are on the middle line of the court—a copy of the Warwick Vase, and a fine statue representing "Adoration," from the antique. At the entrance of the court is a tableau of swords and side-arms; and here, also, to make good the precedent of the previous courts, is a collection of guns; so that the German Courts may be said to be 'under arms.' The north side of this

Court 4.

Bronze vase.
"Adoration."

Side-arms.

'Under arms.'

Court 4. court is brilliant with furniture-velvets and damasks, which need no particular description. Near the end of the court is a colossal head of our Saviour, in marble, by STEINHAUSER. It expresses dignity and grace in a high degree. Beyond it is a font, in bronze, profusely embellished with gothic tracery. Upon the rim are inscriptions in German, which, converted into English, are, "*Suffer little children to come unto me, and forbid them not;*" "*He, then, that believes, and is baptized, shall be saved.*"

Bust of our Saviour.
Bronze font.
Swords and daggers.
The opposite side of the court displays a large case of richly damascined swords and daggers from Solingen, in Prussia ; a great variety of canes, with various mountings, from Hamburg ; another collection from Berlin ; violoncellos, manufactured by GLIER, and a double bass, by KLEMM.

Electro-copper-plate.
By stooping a little, the curious visitor may examine a large electro-copper-plate engraving, probably produced, by electric deposit, from an impression of an engraved plate—a process of modern invention, which promises to bring the finest copper-plate engravings within the reach of all.

Court 5. Court 5 contains but few objects, and these of slight interest. Some specimens of "*hard-ware*" well deserve the name. Here is a seed-sowing machine, which will find but small favour with our farmers, we fear, accustomed as they are to the ingenious and almost *intelligent* agricultural machines of the Western World ! A model, in zinc,

Council-house in Posen.
Lithographic stones.
of the council-house in Posen, displays no very imposing architectural effect. Some very large lithographic stones are the only other objects in Court 5.

Court 11. Court 11, lying immediately west of Court 5, brings us into the region of the Nuremberg artisans, and we find an almost heterogeneous collection of articles, though the greater part of them are included in Classes xxi. and xxii. of the Catalogue. In

Nuremberg artisans.

the centre of the court is a large and massive octagonal show-case of iron and glass, the top ornamented with various figures, in papier maché, bronzed to resemble the iron of the case. These represent the apostles. Within the case are displayed multitudinous objects, made by the Nuremberg Association of artisans. There are fine ivory carvings, silver-plated ware, compasses, morocco cases, meerscham pipes, brass ware, port-monnaies, toilet cases, surgical instruments and cutlery.

Ornamental
show-case.Varied
contents.

The variety and excellence of German hardware and edge-tools are well illustrated in this and the adjoining courts. BOKER, of Rhenish Prussia, and BLECKMAN, of Ronsdorf, exhibit nearly every conceivable variety of tools, of high finish. The brass curtain cornices and ornaments displayed by KEUTGENS are beautiful in design. Besides these objects are japanned ware by RAU & Co.; fine galvanized steel wire and needles; and a collection of scales, of various sizes, in brass, by WEHEFRITZ. Needles, and a machine for drilling needle-eyes, are exhibited by BEISSEL's widow, of Aix-la-Chapelle. Here, also, is an ingenious machine for casting type, from Saxony.

German
hardware
and cutlery.

Brass ware.

Japanned
ware.
Galvanized
wire.

Needles.

Type-casting
machine.

Entering Court 10, to the northward, we pass between further examples of hardware and cutlery; and within the court is still another fine display of knives and edge-tools from the Hague. The principal contents of this court, however, are musical instruments. The cornets, valve-trumpets, and bass-horns of KLEMM are notable. In another corner are instruments from PFAFF and others, with a back drapery of brilliant furniture-damasks, made by LOHSE, of Saxony. In the opposite corner are numerous other musical instruments, with a back-ground of velvets and shawls from Berlin. There is a small organ, of novel construction, from Wurtemberg. In the centre

Court 10.

Knives and
tools.Musical
instruments.

Damasks.

Velvets.

Organ.

of the court is a cast, in bronze, by GEISS, of Canova's Hebe. An exquisite piece of alto-relievo carving, in ivory, hangs upon the south side of the organ.

Court 9. Passing through Court 9, on the right-hand side, we notice velvet, half-velvet, and other furniture stuffs, with a variety of woollen dress fabrics, occupying the entire range. In Court 8, continuing up the right side, we find cloths on the walls, and on the counters, objects of a very different class. Here are drugs, raw materials, and edibles, in curious juxtaposition. Specimens of chicory—a poor substitute for coffee—are in contact with “pine needle wool,” a curious product of the needles or leaves of the pine-tree. Here is also the oil of the “wald-woll,” as this material is called, said to possess medical virtues; and in the centre of the court, are mattresses made of this singular wool, which are “moth proof.” Various specimens of hops are labelled “Badish,” a term which probably indicates their origin, rather than the quality! Displayed in the same group, are refined oils obtained from bones, and capable of resisting intense degrees of cold. Here also are watchmakers' oil and wheat-starch. Still onward, and we find, before a back ground of gay furniture chintz, a variety of snuffs and tobacco, hops, chicory, and alimentary preserves.

Crossing the court, the opposite corner contains only tobacco and snuff from two manufactories. Boxes of rappee, and a dozen other varieties, stand invitingly open, and all who will, may take “a pinch.” Sneezing is remarkably frequent in this vicinity.

The centre of this court contains a variety of linen goods. There are sail-cloths, hempen hose, made without seam, and fire-buckets of stout hemp canvass, which are a novelty.

In the south-west corner, are specimens of wool and woollen yarns. Indigo, archil and cudbear, for dyeing them, are also exhibited here.

Wools and
dye-stuffs.

The west side of Court 9, is occupied entirely by textile fabrics from several exhibitors, of which no particular description is necessary. The plain and fancy woollen cloakings, merinos, and Orleans flannel of the Zollverein, as also the silks, velvets, and half-velvets, make a brilliant display, and will maintain the high repute of these fabrics.

Textile
fabrics.

The visitor will now pass into Court 10, and enter from it into Court 16, lying just west of it. The way leads us between a collection of attractive paintings on the left hand, and a variety of embroidered pictures upon the right hand. The former are specimens of painting on papier maché, and are copies from famous pictures. Among them is WILKIE'S Blind Fiddler. More of these paintings will be found within the court. The embroideries are of a novel character, being imitations of engravings and water-colour drawings in silk and hair. In a portrait of Henry Clay, for example, and in another of Jenny Lind, the hair of each party is employed in the embroidery. These ingenious works are by HITEEL of Saxony.

Paintings on
papier maché.

Blind Fiddler.

Novel
style of
embroideries.

Court 16, contains some showy furniture, up-

Court 16.

holstered with the flowered velvet so extensively manufactured in the Zollverein States. Here are

Furniture.

gilt mouldings, mirrors, and picture frames. On the

Mirrors and
frames.

opposite side are wall papers in great variety, and

Wall papers.

beneath them a pianoforte, a seraphine, and two

Pianoforte.

handsome cabinets. In the centre of the court is a

Cabinets.

lady's writing and work table, elaborately carved in

Ebony table.

ebony, and decorated with changeable views on the Rhine. Some beautiful work-stands are here

Work-stands.

exhibited.

Two fine mirrors are displayed in another corner

Mirrors.

of the court, and beneath them are rosewood cel-
larets and boxes in variety, together with busts,
statues, and vases of iron from the Royal Foundry
at Berlin.

Casts in
Berlin iron.

Bas-relief.

Drugs from
Dresden.

Nickel.

Platform
scales.

German
wools.

Great
produce.

German
colours.

Ultramarines,
how made.

Noticing a bold bas-relief in marble, we pass on,
and turning a little to the left, find ourselves in the
midst of drugs and chemicals, a vast display of which
is here made by GEHE & Co. of Dresden. The ex-
tent of this collection may be estimated from the
size of its catalogue, which embraces forty printed
pages. In front of it are specimens of nickel, in
powders and in cubes, and a variety of choice essen-
tial oils. Some German platform scales may be
seen close by, bearing but small resemblance to
those used in this country.

We have now reached a collection of German
wools, the best portion of which is upon the south
side of the large frame upon which they are ex-
hibited. Passing around, beneath the window, the
samples of various contributors may be examined.
It may be noticed that the producers are nearly all
Counts. The wool crop of Germany is immense.
Besides the large amount employed in the manufac-
tories of the country, vast quantities of the staple
are annually exported.

Passing along the south side of GEHE's display of
drugs, we arrive among the colours, for which the
German manufacturers are famous. Here are ultra-
marines in great variety, and indeed almost every
description of mineral colours. Details are impossi-
ble, and the visitor will not require them. Fine
ultramarine is made from lazulite, (*lapis lazuli*), by
a slow and tedious process. There is, however, a
spurious or artificial article, made by heating to red-
ness, a mixture of china-clay, sulphur, and carbonate
of soda. Venice once monopolized the manufacture
of ultramarine: but it is now far more extensively

made in Germany, France, and other countries.

The smalts of the Electoral Hesse Works are to be found in the collection. Smalt is pulverized glass coloured with cobalt, and is used in bluing paper.

The visitor will find the colours and chemicals of Germany suddenly give place to those of France, which, however, are far less numerous and attractive. A few examples, embracing ultramarines, madders, pectoral syrups, pills of the iodide of iron, &c., having been passed, we enter a court, chiefly occupied by the chocolates, alimentary preserves, and confections, for which the French are celebrated. The visitor will inspect with curiosity, specimens of desiccated vegetables, that is, vegetables from which the moisture is expelled, leaving all the peculiar properties and flavour, so that green peas and fresh mint can be had as well in December as in June, and that without the aid of a green-house.

Here, too, are all manner of meat and fruits, the latter looking temptingly from their glass prison-house, put up with all the care and taste of the RÔDELS and APPERTS and FITONS of Paris. One corner of this court contains some curious specimens of food prepared from the blood of animals, by the agency of a fluid called Brocchieri water, after its inventor. Furs, and silk-worm eggs, and cocoons, are also to be met with here. Wool of excellent quality may be found upon a table in the centre of the court, while, close at hand, is a display of fine qualities of drawing, and letter, and other varieties of paper.

Passing out of this court, close by MENIER'S display of fancy chocolates, we enter Court 26. Our course will now be along the line of the windows—beneath which is an extensive display of ornamental castings in zinc. Let us first turn a little to examine the beautiful specimens of printing in gold, colours,

Smalts.

FRANCE.

French chemicals.

Chocolates and choice confections.

Desiccated vegetables.

Preserved fruits.

Brocchieri fluid.

Silk-worms.

French wools.

Papers.

Court 26.

Zinc castings.

Gold printing.

German
tapestries.

exhibited by ERNEST MEYER. Near to these is a display of furniture tapestries, which, together with others, hanging high in the court we have just left, are from MOURIEAU of Paris.

Imitation
bronzes of
the Soci  t  
de la Vieille
Montagne.

Before us, there now stretches a long line of imitation bronzes. They are the zinc castings already alluded to, and display a very great variety. Over our heads hang chandeliers and ornamental baskets, while figures, busts, vases, candlesticks, and household wares line the tables. Presently we find larger ex-

Bath-tub, &c.

amples—a bath-tub, vases on pedestals, and statues. They are exhibited by the Vieille Montagne Zinc Company, which presents also, samples of white zinc paints, and sheet zinc, for roofing and sheathing.

Belgium zinc
mines.

The operations of this Company are exceedingly varied and extensive, as may be judged from the space it fills in the Exhibition. The zinc mines are in Belgium. Immediately beyond this collection, is

Iron-wire
furniture.

an assortment of iron-wire furniture for gardens, arbours, halls, &c. It is both light and elegant, and embraces seats, jardini  res, baskets, and many other articles. They are exhibited by TRONCHON of Paris. Behind them are displayed some very fine specimens of leather.

Leather.

Bottles, &c.

Court 28.

A variety of hardware, and specimens of glass bottles and demijohns, may be inspected in an opposite corner, before we enter Court 28. The variety here is not extensive. A prominent object is a group in brown plaster, representing a hunter and a bear in the death struggle. The work is bold and effective. The body of the hunter is relaxed in the terrible clasp of the bear, which, in turn, is writhing in the death agonies, with the knife of the hunter still buried in its throat. The work was modelled by FREMIET.

Hunter and
bear in
plaster.

Novel
machines.

Here are some novel machines for bleaching linen, cleaning knives, and other household processes ; basket

ware ; huge mill-stones ; ropes for rigging and for mining. Mill-stones.
Mining rope.

Let us pass now through Court 27 into the east nave, observing, as we proceed, a plaster model of a Bengal tiger by JACQUEMARD. Court 27.
Bengal tiger.

At the entrance into Court 23 we may observe a variety of bronze statuettes, chiefly of French celebrities ; two figures in *bisque* ; and a large vase of decorated porcelain. A show-case, projecting from this court upon the nave, contains a fine collection of the brilliant velvets for which, in common with its silks, Lyons is so famous. They are displayed by the Association of Velvet Workers, and in richness of colours and quality are not surpassed by any in the Palace. Beyond this case, and upon the central line of the court, are linen cambrics and lawns of great beauty. Hand-spun flax, of exceeding fineness ; handkerchiefs, embroidered, and with richly printed borders—and some examples of pictures printed upon cambrics, are here displayed. Passing down the court, upon the right hand we notice delicate and various coloured crape along the wall, and upon the table, rich silks from Avignon. Some fine silk bolting-cloths may be seen here, and following them, cashmere vestings and black silk plushes. Court 23.
Fine
bronzes.
Large vase.
Lyons
velvets.
Court 23.
Linen and
lawns.
Hand-spun
flax.
Printed
cambrics.
Crapes.
Avignon
silks,
Bolting
cloths.

Before leaving the court, another case of rich velvets may be noticed on the middle line, and then we enter Court 24. Red and figured cotton fabrics first present themselves, overhung by crochet tissues and woollen blankets. An embroidered silk quilt may be inspected here, if the visitor will lift the screen which enviously conceals it. Rich velvets.
Court 24.
Crochet
tissues.
Silk quilt.

A central case contains the tarlatan fabrics of DONAVE-RONAT—delicate and gossamer-like tissues—some of them printed with gold and some with silver ornaments, while some are inwoven with gold thread. Taratans.

Water-proof
fabrics.

Painted
white crape
dress.

Court 25.

Glove
machine.

Iron and
zinc wares.

Clay pipes.

Distilling
apparatus of
great value.

Platinum.
Palladium.
Iridium.
Fusil of
platinum.

Metallic
gauzes.

Butter
churns.

Emery rolls.

Lithographic
rollers.

Carpet.

BAUDOUIN, BROTHERS exhibit silks rendered imper-
vious to water, and water-proof cloths and leathers;
and upon the wall space above, is displayed a robe
of white crape, painted, as the card informs us,
“a la Australienne”—a *mode* of which we have no
definite knowledge.

At the entrance of Court 25 is an odd-looking
machine, which, in its better days, was employed to
cut out the dainty kid gloves which look so fascina-
ting upon fair hands.

Within the court are kitchen and household uten-
sils, in zinc and iron, and of great variety; and high
above them a tableau of odd-looking pipes and pipe
bowls, in white and coloured clays.

The large distilling apparatus, enclosed in a glass
case in the centre of the court, which most visitors
might mistake for tin, is made of pure platinum, and
is worth *twelve thousand dollars*. It is designed for
the distillation of sulphuric acid, and is the most
complete and costly apparatus for the purpose in
the world. It is exhibited by DESMOUTIS & Co.,
who display also crucibles, dishes, and capsules, in
platinum, with specimens of palladium and iridium
points for gold pens.

In the same case is a fine double-barrelled fusil,
in platinum, made by HOUILLIER-BLANCHARD.

Metallic gauzes, in great variety, for straining
the pulp of paper, together with masks, safety-
lamps, and other articles, are exhibited by ROSWAG.

The mechanical churns of LAVOISEY will interest
the housewife by their simplicity of construction.
Those huge black rolls, close by them, are cylinders
for grinding emery, so extensively employed in polish-
ing needles, &c.—while those smaller buff-coloured
rolls are used by lithographic printers for distribu-
ting the ink upon their forms, or engraved stones.
The huge carpet which overhangs this court, is one

of many examples, from France, of the skill of the French weavers. Crystal door-knobs and ornaments are exhibited by BERGER-WALTER, and other specimens of glass ware may here be seen, including samples of blown window-glass. COULAUX & Co., of Molsheim, make a varied display of cutlery and hardware. Here is a model of a steamboat, with side-wheels arranged to work laterally in the water, on the principle of the oar.

Crystal door-knobs.

Blown window-glass.

Cutlery and hardware.

New model of steamboat.

Having completed the circuit of Court 25, we shall now return, in the direction of the nave, through Courts 24 and 23. In the first, we find, on the right hand, woollens, linens, and *broche* tissues ; while, in the centre, are the silks and satins of GINDRE & Co.

Court 24.

Textile fabrics.

In Court 23, we find various styles of velvet and velvet trimmings from St. Etienne, above which is a portrait of Louis Napoleon embroidered on satin.

Court 23.

Louis Napoleon on satin.

The fancy silks and satins of DONAT & Co. now occupy the table to the nave. More linen cambrics and lawns, and silks—both in the raw and manufactured states—may be found displayed on the middle line of the court.

Donat's silks.

Linens, &c.

As we turn in the nave to enter Court 18, we may linger a few moments to notice numerous small plaster figures of animals, modelled by FREMIET. Here are bronzes, and the companion vase of the one we noticed at the entrance of Court 23.

Court 18.

Animals in plaster.

Bronzes.

Conspicuous here is the case in which STEWART & Co. exhibit variable specimens of their importations of the most superb French silks, satins, embroidered dresses, and mantillas. The right-hand side of the court is occupied by WATTINE-PROUVOST and ROUQUE—the former with rich satin cloths, of various colours, and the latter with brilliant cashmeres. Coach laces and curiously dyed wools are displayed on the middle line.

Rich dress goods.

Fine cloths.

Cashmeres.

Coach laces.

Dyed wools.

Court 19. In Court 19, we find, first, Cashmere shawls, and
Ball dresses. a case of elegant ball dresses. In the centre, is a magnificent display of dress silks by MAUPIN & Co., of Lyons. These silks are very deservedly the objects of general admiration, for their richness of colour, and for the artistic beauty of design which characterizes them.

Court 17. Progressing into Court 17, we find ourselves sur-
Bronzes and tapestries. rounded by large bronzes and hangings of tapestry. The west side is entirely occupied with these objects, many of which are beautiful examples of ornamental art. They are contributed by AUBANEL, of Paris.

Turning point. Beyond this court lies the territory of the Zollverein, which we have already traversed. Here, therefore, we commence our return once more to the nave, lingering a moment to inspect, upon our right hand,
Patent type. the printing types of GAUTHIER, patented in France for improved bearing. We may justly admire here
Photography. the photographic prints of BLANQUART,—beneath which is a display of paper boxes for confectionaries,
Bon-bon boxes. wedding-cake, &c., exhibited by CERF & NAXARA. A long table across this court is covered with specimens of printing and lithography, which exhibit
Typography. the admirable state of both arts in France.
Lithography.

Fancy labels. BARBAT's ornamental labels are very beautiful, and his specimens of printing, upon *thin sheets of wood*, are curious. A volume of the Gospels, printed with illuminations, will repay close inspection; and the five folio volumes on "L'Ancienne Auvergne et Le Velay," should not be passed without notice. The north-east corner of the court affords examples of fancy stationery, more fancy boxes, in paper, and a tableau of gold papers and borders.

Court 18. Entering Court 18, the visitor may stop to examine a curious picture, wrought with the hair of Chateaubriand
Chateaubriand briand, and representing the room where he was born.

Within the court, we find lace mantillas, cashmere shawls, gloves, muslins, and de laines. Laces, &c.

Court 17, affords us various examples of the fine cloths for which France is reputed famous, but they are too much alike to justify detailed observation. Court 17.
Fine cloths.

We have now completed our notice of the textile fabrics of "la belle France," and have before us a brilliant display of those artistic works in which she has never been surpassed and seldom equalled. Change of
objects.

Courts 12, 13, 14 and 15, are thrown into one grand saloon, and no part of the Palace presents so brilliant an aspect as this. Magnificence reigns throughout. We enter it from the nave and direct our attention exclusively to objects on the right-hand line. The elegant and artistic bronzes, comprising statuettes, vases, candelabras, and richly mounted clocks, from DUPLAN & SALLES, first meet the eye, which finds much to admire. Time presses us, however, and we pass on to the varied and almost bewildering display made by LAHOCHÉ, which might well tempt us to believe that we were in the gay city of Paris itself. Here are such multitudes of objects, beautiful, costly, and curious, that we could not inspect them separately in hours. Clocks in bronze and crystal mountings, candelabra of exquisite patterns, porcelain services, genuine Sevres, and others of scarcely inferior beauty, delicately cut glass, Bohemian glass epergnes and vases, and a fine copy of Raphael's Holy Family on porcelain, are a few of the attractions in the collection. Casting the eye upwards, we observe a variety of beautiful table-covers, by FANFERNOT & DULAC. Beyond, we find pianofortes from the famous manufactory of ERARD, and passing a marble bust of the French Emperor, we come to a group of objects, embracing curious clocks, mechanical birds, a pair of superbly mounted pistols, a marble bust of Cerito, a mosaic table. A grand hall.

Fine bronzes,
clocks, &c.

LAHOCHÉ.

Clocks.
Candelabra.
Porcelain.
Cut glass.
Raphael's
Holy Family.
Table-covers.
ERARD's
pianos.
Bust of Louis
Napoleon.
Singing-birds.
Cerito.

Pianofortes. Beyond these are the pianos of DETIR & Co., and
Furniture. rich cabinet furniture from BALMY. The chief ob-
Circular divan. ject is a circular divan in French walnut, for the
 centre of a large drawing-room, constructed in the
 most tasteful style and of elegant materials. The
Wall papers. elegant paper decorations of DESFOSSE adorn the
 upper part of the court. The end is ornamented
Large mirror. with a splendid mirror, beneath which we turn to
 inspect the other side of the court. Here every-
 thing is in keeping with the objects we have
Rich bronzes and ornaments. examined; massive, and yet graceful bronzes, rich
 carpets and tapestries, cabinets and tables, in ebony
 and gold, superb brocaded chairs, clocks and can-
 delabras, from the display of RINGUET, LEPRINCE &
 Co. of Paris. We must not overlook a splendidly
Carved buffet. carved side-board, made by a branch of the house in
 New York. Beyond these elegant objects, we find
 the pianofortes of DE BAIN, one of which is a prin-
 cipal object of attraction in this saloon. It is the
Mechanical pianofortes. *piano-mechanique*, or antiphonel pianoforte, an instru-
 ment which is played with a crank, after the manner
 of a hand-organ. It is an exceedingly ingenious,
 yet simple piece of mechanism, and the sound of its
 clear, brilliant tones, is the signal for an immediate
 gathering in the vicinity.

LEROLLES' bronzes. The remainder of this section is occupied by LE-
 ROLLES, BROTHERS, with an extensive collection of
 artistic bronzes—embracing all objects produced in
 bronze—from their own original designs. An enu-
 meration would be tedious and unimportant, but the
 visitor may well devote considerable time to the ex-
 amination of the objects.

Decorative wall papers. ZUBER & Co., of Rixheim, occupy the high wall-
 space of Courts 12 and 13, with some magnificent
 tableaux of decorative paper.

Brilliant court. One court of the French division remains to be
 visited. It is the court of the French Imperial

manufactures—the Gobelins and Beauvais tapestries and the Sevres porcelain. We have but to turn on emerging from Court 12, to enter this brilliant chamber. There are five pieces of Gobelins* and seven of the Beauvais hung upon the walls, while beneath them are arranged the rich and costly porcelain of Sevres. The products of the Gobelin looms are of wonderful and unrivalled beauty. It is now nearly two hundred years since their manufacture was commenced, under the direction of Louis XIV., and from that time to this they have been made chiefly for royal gifts. Their name is said to be derived from a famous dyer in Paris. It is the labour of many months—sometimes of years—to produce one of these works. Of those on exhibition, the one entitled “The Chase, and Dead Nature,” is for sale, at 12,000 francs. The work, entitled “Autumn,” is valued at something more than 6000 francs. These, however, are but small examples of the size and value of the Gobelin tapestries. The Beauvais manufactory in Picardy, produces many beautiful works, but they are far less esteemed than those of the Gobelin.

Imperial
tapestries
and porcelain.

GOBELINS.

Origin.

Prices.

BEAUVAIS.

SEVRES.

Costly vases.

The imperial manufactory of porcelain is situated at Sevres, midway between Paris and Versailles. Its productions are of great beauty and of high price.

The great vase in the centre of the court is valued at 15,000 francs, and the pair of vases—one on each side of the entrance—are valued at 14,000 francs.

* Two of these will be sent back to Paris on the 1st of November.

DIVISION D.

**ITALY, AUSTRIA, HOLLAND, HAYTI, CUBA, BRITISH PROVINCES,
DENMARK, AND THE UNITED STATES.**

Transition. THE transition from France to Italy, in our mode of progress, is an easy one. We have but to cross the west side of the Palace and enter Court 6 of

Flag of Italy. Division D, over which the flag of the Italian States is displayed. The first object which meets one's eye within this court is a very pleasing work in marble,

Son of Tell. representing the son of the Swiss patriot, Tell, at the moment that the arrow has been shot, and transfixed by the well-directed arrow to a neighbouring tree. It is the work of ROMANELLI, of Florence. To the left of this is a table of statuary marble, a rustic or garden chair, and a beautiful column of variegated stone, with an elaborate Corinthian capital of white marble.

Marble table and pillar.

In the centre of the court are various small works

Mosaic wood. in marble, and a few examples of mosaic work in wood. Upon the side tables are exhibited embroideries and laces, beneath a row of bas-reliefs in marble and in plaster. The former are two works by the Danish sculptor, Prof. JERICHAU, now residing at Rome.

Bas-reliefs.

The visitor's attention will here be attracted by a

Silver filagree. piece of silver filagree work, representing Columbus, a beautiful work by BENNATI, of Geneva, upon either

Gilded vases. side of which is a vase of carved wood, richly overlaid with gold.

Just outside of this court the visitor may inspect, now, the Italian furniture, which is somewhat disadvantageously crowded together. It exhibits a great degree of elegance—being made of beautiful woods and frequently elaborately gilded. There is a massive ornamental bedstead of gilded mahogany—a very beautiful *étagée* in rosewood, and an arm-chair in the Greek style. Several elaborately carved mirror frames, and a great variety of beautiful chairs, known as Chiavari, from the place where they are chiefly manufactured, in Sardinia, and numerous other articles, would, if judiciously displayed, make no inconsiderable feature in the Italian exhibition.

Italian
furniture.

Gilt bedstead.

Etagée.

Chiavari
chairs.

Returning from this detour, and re-entering Court 1, upon the west side, we find specimens of silks and velvets, and various small works in marble. The most attractive object here, is an antique cabinet of polished ebony, displaying the arms of the Medici family, and beautifully embellished with seventeen panels, inlaid in Florentine mosaic, by Bosi. Numerous beautiful examples of this exquisite art will be found in the next court. Mosaic inlaying is carried to a high degree of excellence in the Italian States, and particularly in Tuscany. It consists of cementing into a ground of marble, pieces of coloured stones and glass, to resemble paintings.

Court 1.

Silks and
velvets.

Medici
cabinet.

Stone mosaic.

In Court 12, which we enter from the nave, there are nearly a score of table tops in mosaic marble, displayed along the right-hand side. They exhibit exquisite art in the arrangement of the mosaics. Specimens of the coloured stones, with which the designs are produced, are exhibited, near the slabs. Thin slabs of these stones are sawed off, and pieces of suitable size and shape produced for the process of inlaying, to which allusion has been made. The oblong table top, near the centre of the collection, is,

Court 12.

Table tops.

Coloured
stones.

Mosaics.

perhaps, the finest example of all. It is the work of BETTI of Florence. There are also two or three by BOSI, already named in connection with the antique cabinet. The wall-space above these mosaics

Silks.

is richly draped with figured silks from Turin and Genoa. The objects in the centre of this court are worthy of particular notice. To step back a little

Bust of The Betrothed.

and look at the exquisite work in marble, which the sculptor calls "The Betrothed," will certainly repay us. This is from the same hand that wrought the statue of Wm. Tell's Son.

Cast in bronze.

An extraordinary cast in bronze next claims our notice. It is included in Class xxiii. of the Catalogue, though it might well have been ranked as a work of art. It is a cast of a shrub—the *crassula*

New process.

portulacoides—taken in one mould, direct from the object, by an entirely new and exceedingly ingenious method. The cast is exhibited just as it came from the mould; not a file has touched it. It is the

Tables in mosaic woods.

work of CLEMENTE PAPI, of Florence. The tables of mosaic-woods now elicit our earnest admiration.

We may well doubt, at first, what we are told concerning them—that those admirable and brilliant pictures of battles, landscapes, and flowers, are not painted, but produced by inlaying different coloured woods. This is, however, the exact truth, and the patience of the workman seems almost as surprising as his skill. In the centre of the court is a marble

Marble salver from Cellini.

salver upon a pedestal. The dish is a copy of the famous work in silver, of Benvenuto Cellini, and the design is admirably executed.

Bust of Pio Nono.

Besides some statuettes, there is a marble bust of Pio Nono, said to be a good likeness. Passing around this we find upon the west side of the court,

Silk-velvets.

and hung upon the wall, a rich display of silk-velvets, from Genoa. Some of these are remarkably beautiful, resembling velvet ribbons, alternated with rich

stripes of lace. The tables afford us specimens of fine jewellery, and a variety of beautiful ornaments in coral. A parure of pearls and brilliants will attract especial notice. It is from Bussi & Co., of Turin. A little further on, is a case of brooches, bracelets, and other ornaments, in Florentine mosaic, by ENRICO BOSI. Here we may turn to the centre, and notice a boar's head cast in bronze, also by PAPI—a work not less remarkable than the plant. Every hair of the savage beast seems to have the vitality of life within it. Cupid clipping his own wings, is the subject of a graceful statuette near by. Before leaving the court, we may be gratified by inspecting a variety of cameos cut on shells, by CASALI, of Rome, which we find among a group of small works in marble, just at the entrance of the court.

Jewellery.

Corals.

Mosaic ornaments.

Boar's head in bronze.

A Cupid.

Cameos.

The black eagle of Austria hovers over us as we enter the next court on the line of the nave—Court 18. A statue called "The Deserted," is not a very prepossessing guardian angel to the territory beyond. All around, however, is bright and sparkling. We are in the region of glass; the produce of Bohemia glitters upon the tables in a thousand fanciful shapes. The wall-space of the entire court is draped with cashmere and barege shawls, numerous contributed from Vienna. The side and centre tables, on the right hand, are covered with every description of fancy glass ware. At the entrance of the court is a splendid epergné and fountain of rock crystal, valued at the remarkable sum of \$6,000. A case of Bohemian garnets is followed by a large display of artificial stones of every conceivable description. A mammoth prism affords a beautiful specimen of glass casting and polishing. Then, glass beads, buttons, brooches, hair ornaments, lustres and pendants are profusely displayed. The court contains

AUSTRIA.

Court 18.

The Deserted.

Region of glass.

Shawls.

Fancy glass.

Centre piece.

Garnets.

Huge prism.

Beads and buttons.

a very beautiful work in marble by GALLI, of Milan.

Bust of
"Prayer."

It is a female head representing "Prayer." It is marked by great purity of expression. The entrance

Court 19.

into Court 19, leads us by a work in marble on our right, which we shall hardly pass without remark.

Veiled head.

It is one of several examples of what are called veiled statues. This is a head of a female, and, at first sight, we might suppose that it is actually draped with lace or crape ; but a moment's inspection shows us that it is an effect produced in the marble, and that the apparent folds of the lace are ridges raised by the chisel of the sculptor. These works—pleasing as they certainly are—are rather

Tricks of art.

tricks of art than exemplifications of its higher attributes.

Swords and
scythes.

In Court 19 we find the scene entirely changed.

Upon our right hand glitter the sword and the scythe, as if the spirit of war and the spirit of peace had met in council. Here are guns and pistols of very beautiful workmanship, and a fine display of patent percussion caps. The Austrian scythe appears rude in comparison with the polished blades which lay low the ripe grain of our western fields. It is, however, of good material, and is extensively used in Europe.

Guns and
pistols.

Marble vases
and table.

Our attention will be arrested by a row of pedestals crowned with vases, and by a toilet table in curiously variegated marble ; which, together with table tops, vases, and a large collection of specimens of polished marble, and polished antediluvian ammonites of extraordinary beauty, (to be found as we pass up the other side of the court,) constitute a remarkable contribution from J. RAMSAUER, of Upper Austria.

Fossilized
ammonites.

Iron lamp-
post.

A tall and highly-ornamented lamp-post of cast iron, stands in the centre of this court. It is from the foundry of PRINCE VON SALM. and is intended for

the street, or a public park. We are now in the rear of the court occupied by Thorwaldsen's group, Austrian art. and beneath the wall which encloses it, are arranged a number of works belonging to Class xxxi. in the Austrian Department of the Catalogue. We may inspect these works advantageously at this stage of our progress. At the extreme right of the line is a bust in marble, representing "Religious Meditation," followed by a variety of works of varying interest. The "First Steps," by MAGNI, will detain most visitors, for a moment at least, by its pleasing design; and they will not fail to observe the basket of flowers ingeniously carved out of a block of marble by GALLI, who has also a bas-relief of flowers near at hand. Works in marble. "Hebe offering nectar to the Eagle," is a work of merit by Professor KACHSZMAN, of Vienna, and not far beyond it, is a cage of Cupids by MOTELLI, one of those works which exhibit the ingenuity, rather than the genius, of the sculptor. "First Steps." The little fellows are thickly clustered, but betray no great uneasiness at their confinement. Marble flowers. The artist evidently thinks that Cupid needs to be kept in a cage. Hebe and Eagle.

A head of our Saviour, in marble, is one of numerous examples in the Exhibition of the fondness of the Italian sculptors for religious subjects, and indicate, perhaps, the dominant influence of the ecclesiastical arm. Cupids in nests and in baskets, as well as in cages and upon mantel-pieces, abound in the Austrian department. There is very little probability, certainly, that the race will become extinct! Cage of Cupids.

The wall beneath which we are passing is hung with various pictures from Austrian artists, among which are two by WALDMÜLLER, both charming examples of his style. They are called "Blowing Bubbles," and "Breaking up of School," the latter a much-admired picture, and the former of scarcely less Religious sentiment of Italian artists. Cupids abounding. Austrian pictures. "Blowing bubbles." "Breaking up of School."

Few pictures. excellence. The Austrian painters have not contributed extensively to the Exhibition, only four works appearing in the Picture Gallery, where it is somewhat surprising that these works of Waldmüller, and one or two others to be found near them, are not included.

Medals. A collection of medals, produced by a new method, hangs between the pictures we have named. The

Bronze Venus. bronze statue of Venus stepping into the bath, is a good example of modelling and casting. A variety of objects in terra cotta, a veiled head and a few other works in marble, bring us to the end of the Austrian division, and we turn to examine those which are displayed upon the opposite line. A collection of figures and statuettes in terra cotta afford some good examples of modelling. The beautiful

Terra cotta. buhl furniture in rosewood, for which Austria is famous, is exhibited in various specimens distributed through the division. A highly polished cabinet, or

Buhl furniture. cabinet. book-case, is, perhaps, the finest example. An elegant table in front of it is partly concealed by an interesting object placed upon it. It is a section of

Plastic map of Switzerland. a plastic map of Switzerland, showing the elevation of the Alps and the depression of the subjacent valleys. Just above it is a somewhat similar model,

Salt mine. exhibiting the section of a salt mine in Upper Austria. Some hyalotypes, or daguerreotypes on glass, are displayed at this point, and beyond them numerous further examples of terra cotta figures.

Terra cotta.

To the left, in the centre of the court, are various pleasing works, in stone and marble. A centre-table and four chairs elaborately carved in gray stone exhibit a novel and substantial style of furniture, "Leda with the Swan," a boy on a tortoise and another on a crab, are three attractive works in marble, by CROFF of Milan.

We now pass the ammonites and marbles to which

allusion was just now made ; and here the visitor may observe some specimens of Istrian asphalte.

Asphalte.

The next step will carry us into the hardware and cutlery court, and we are naturally surprised at the multiplicity of the exhibition in these classes. The town of Stadt Steyr, alone, sends upwards of forty different contributions, and principally of knives and forks. The exports of Austria, in various descriptions of hardware and the coarser descriptions of cutlery, are very great. The quality of these articles is less to be regarded than the low price at which they are manufactured. It may be added here that the manufacture of these goods, in Upper Austria, does not concentrate in a few large establishments, but respectable workmen are generally makers, on their own account. The iron mines and manufactures of Austria are a principal source of the national wealth, and give employment to an immense number of operatives.

Hardware and cutlery.

Stadt Steyr.

Exported cutlery.

Numerous makers.

Iron mines of Austria.

In this court we find a coil of lead pipe, claiming to be 1800 feet long ; here also are various handsome chairs of bent wood, with cane seats, and a highly polished buhl table, of rosewood. In another part of the court are buhl chairs, and a sofa, with cushions of fine green morocco.

Lead pipe.

Furniture.

Hardware, in great variety, and German silver in sheets, and also manufactured into table-ware, are found in the right-hand corner of Court 19, as we pass again into the front court. We are once more in the midst of the produce of Bohemia.—China, and glass, and earthenware, in an almost endless variety of forms and objects, meet our eye. Here, also, is another, and perhaps the best, example of the veiled figures. Before we complete our survey of the objects in this court, we must afford a moment's notice to the curious and brilliant table top of *mosaïque d'email*, which, in a French inscription,

German silver.

Court 19.

Bohemian produce.

Veiled bust.

Mosaic table top.

is said to be a precise copy of a piece of the pavement of the Basilica of St. Mark's at Venice.

Gold chains.

A collection of gold chains and other objects, is one of few examples in the Palace of Austrian jewellery.

HOLLAND.

Court 23.

We are apprized, by the flag which hangs at the entrance of the next court, that we are entering the Department of Holland. This country is represented by about one hundred and fifty exhibitors, exclusive of the large number of artists whose works appear in the Picture Gallery. Nearly every class of objects is embraced in its contributions, and a very considerable degree of interest will be felt by the visitor in passing through the several courts which they occupy.

Number of exhibitors.

Pictures.

Furniture in zinc.

The first objects which we encounter are light castings, in zinc, for ornament and utility—such as work-tables, flower-stands, vases, figures, &c. These are painted to resemble bronze, and combine grace and durability in a very satisfactory manner. They are contributed by SCHUTZ, whose casts of the stag and wolves we have before named. He exhibits,

Reed baskets.

also, baskets and flower-cases in twisted reed.

Ebony cabinet.

In the front of the court is a handsome cabinet of carved ebony, and grouped beyond it are further examples of furniture, which are chiefly substantial rather than ornamental.

Ivory carvings.

Various small carvings, in ivory and bucks-horn, are good specimens of this art, near the entrance of the court. At the other extremity of it, is suspended

Chandelier.

a chandelier, of numerous branches, in the same materials. These are exhibited by HATT, of Leyst. An illustration of the old art of embossing silver ware, by beating out a single piece, may be seen in a handsome beaker, made by GREBE of Rotterdam.

Silver beaker.

Balances.

Some sensitive analytical balances are exhibited by BECKER. Among a variety of dressed skins, there

are beautiful specimens in those of the swan and greb. The plumage of the last-named water-bird is held in high esteem. Greb and swan skins.

A very curious collection of Japanese articles is displayed in this court. They are the contribution of the Chevalier LEVYSOHN, old chief of the Holland Station at Japan, and they embrace a large number of the characteristic productions of the singular and exclusive people of that country. The minerals and coins of the country, are not the least attractive part of the collection. We can not attempt, in this brief Manual, to give even a summary of the varieties. Japanese articles.
Minerals.
Coins.

Extending our observations into Court 24, we find a large variety of whips and canes, in whalebone—plain, twisted, knotted, and inlaid with ivory—and mounted in gold, silver, and pearl. They are from Post & WENDT of Gouda. The scientific visitor will find interest in some glyphographic blocks, with the impressions obtained from them. Court 24.
Whips and canes.
Glyphographs.

A few pictures, by Dutch artists, are to be found hung in this court; but for the best examples of this school of art, the visitor must go to the Gallery of Paintings, where there are upwards of a hundred and twenty contributions. Pictures.

We notice here a variety of linen fabrics—as table-cloths, canvas, and linen bed-tick—made of Dutch flax. A small picture, resembling an etching or an outline in India ink, proves, on close inspection, to be a design cut in white paper and laid upon a background of black. Linen goods.
Picture in paper.

There are, upon the west side of the court, to which we now turn our steps, many examples of blankets, made of Dutch wool. Some of these are of admirable quality, and of graduated thicknesses. Blankets.

A circular sofa, from the Hague, is a useful and ingenious piece of furniture. It consists of six sepa- Circular sofa.

Court 23.

Retorts.

Bows and
arrows.Military
goods.Japanned
furniture.Folding
screen.Lacquered
table.

Iron bust.

Court 25.

Morse's
telegraph.

Court 27.

Machinery.

Water-wheel.

Fire escapes.

Earth-borer.

Seed drill.

Group in
stone.Pheasant
house.

Dutch clocks.

rable arm-chairs. Returning into Court 23, we notice the retorts of BATKA—the lower part of the globes or bowls being covered with copper, by the electro-galvanic process, they withstand a strong heat. Bows and arrows, models of circular staircase, and military trimmings, are here met with. A prominent class of objects in this court, is the japanned or lacquered furniture, made by ZEEGERS of Amsterdam. He exhibits a large folding screen, of eight partitions, ornamented with gilded figures, in the Japanese style, and hung with engraved copper joints or hinges; also, a table, brilliantly painted and lacquered in crimson, and screens in the same style of decoration. A bust, in cast iron, of the late King William, is a good specimen of its kind.

Passing now through Court 25, in which the visitor will find the office of MORSE's Electric Telegraph in communication with the whole extent of the Morse lines.

We find in Court 27, further examples of the products of the Netherlands. The machinery of Holland is not extensively represented. We find a new description of fire-engines, and a centrifugal water-wheel. The latter is a simple and useful machine. There are also two mechanical contrivances for fire escapes, an earth-borer to open channels for supplying the roots of trees with water in dry weather, and for infusing manure into the soil, a new seeding machine, and a swing plough. In this court is a fine specimen of sculpture in free stone, representing "The serpent in the lion's den." There is much boldness in the design, and good physical development. It is the work of LEVERMANN of Doesburgh. A curious object is a house of bamboo, designed for an aviary, or more especially for keeping pheasants.

The Dutch clocks, in this court, do not vie, in extent or beauty, with the showy examples of our

own, nor with those of other European makers. They are of good quality, however, and an astronomical clock, made by KAISER, of the Hague, will bear comparison, as a time-keeper (*tyd-bewaarder*), with a good chronometer. There are various contributions of rope, twine, cords, and lines. Of the first-named, there is a novel example in the "concentric" or equal drawing rope, made by VAN BEEFTNGH of Katwyk, with patent machinery. The curious may ascertain its peculiarities by reference to the specimens themselves. Passing by a statue of Josephus, in wood, we find, ranged upon tables beneath the windows of the Palace, the objects belonging to Classes ii., iii., and iv., in the Catalogue. They are numerous, and of much merit. Among the candles, we notice long tapering ones, for burning at church altars. There are specimens of Dutch madder, a substance much employed in dyeing, and from which the "turkey red" colour is obtained; of Dutch flax, of starch, of horse-hair, and many other "raw materials," with this hasty generalization of the contributions of Holland, we must take our leave of them, and turn to glance, for a moment, at the contributions of Hayti and the West India Islands, which are all embraced in Court 29. The Emperor of Hayti, FAUSTIN I., has sent, through the Consular Agent of the United States Government, HENRY DELAFIELD, Esq., specimens of the native produce of the country. The list will be found, in detail, in the Official Catalogue. The block of mahogany, included in the Catalogue, is not in this court. It is in Court 1, and may be noticed when we inspect the contents of that court.

Clocks.

Astronomical clock.

Ropes and twines.

Novel rope.

Statue of Josephus.

Altar candles.

Madder for "turkey red."

Raw materials.

HATTIAN contributions.

Block of mahogany.

Of the WEST INDIA ISLANDS, Cuba and Bermuda are represented in the Exhibition, but neither of them to any great extent. From Cuba, we find sugar, cigars, and some medicinal preparations, and

WEST INDIES.

Cuba.

Bermuda. from Bermuda, arrow-root, and boxes made of cedar wood.

BRITISH GUIANA. The next court we enter is entirely occupied with the interesting contributions of British Guiana, and is our first introduction to the Colonial resources and industry of Great Britain.

Variety of objects. British Guiana is situated on the coast of South America, and the intelligence and enterprise of its settlers may be presumed from the extent and variety of the contributions to be found in this court. Of these the Catalogue presents a list of nearly one hundred and fifty, the majority of which are the natural productions of the country.

Natural products. We shall not attempt to direct the visitor from object to object in this court, as they are so grouped as to present themselves in classes to our notice. The products of the country are numerous and valuable, including arrow-root, tapioca, coffee, starch, sugar, cotton, palm-fibres, cassava, bread-fruit, and a great variety of excellent timber.

Woods of the country. The latter is displayed in almost innumerable specimens, in the centre of the court, while all around are the raw materials and vegetable productions already enumerated.

Raw materials. The barks of the country are largely exhibited, for medicinal properties.

Native barks. The manufactures are of the simple kind suggested by the wants of the natives and the material at their hands.

Manufactures. There are bark canoes, bows and arrows, and war clubs, necklaces, fans, calabashes, hammocks and mats of the palm-fibre, brooms, queus, and other objects.

Shaak-shaaks. baskets, gongs, flutes, and shaak-shaaks. The three last-named articles are rude musical instruments with which the festivities of the Indians are enlivened. A dance without the shaak-shaaks would be no dance at all. They resemble gourds, and contain seeds which make a great noise when shaken.

The natives ornament them with feathers. A case of stuffed birds, and a variety of dressed skins, illustrate the natural history of the country. Stuffed birds. Dressed skins.

The collection deserves more than a passing glance, and we are sorry to dismiss it with so brief a notice.

Entering Court 26, we find ourselves again in the Department of the United States, and among the objects of Class x. of the Official Catalogue. They are introduced to us by what the maker calls "a cosmographical globe." It is constructed with the land in relief, and mountain ridges indicated by further elevations. In a corner behind this, we may inspect some excellent specimens of silver-plate and card engraving, by HYATT, and a frame of cameos cut on shells, by KINNEY. Court 26. UNITED STATES. New globe. Card and plate engraving. Cameos.

Photographic pictures, being regarded as a philosophical product, are embraced in Class x., and in no department of scientific art is the Exhibition more fruitful than in this. Upwards of thirty contributors of daguerreotypes are numbered in the Catalogue, and the collection is so extensive, that one might well grow weary of the task of examining it in detail. DAGUERREO-TYPES. Numerous contributions.

The excellence of American photographs is acknowledged abroad, where no pictures have been obtained of equal beauty. The first portraits from nature, obtained, by the photographic process, were taken in New York, and it will hardly be invidious, to say, that the precedence which the metropolis can assert in point of time, she may, with justice, claim also in point of merit. It is not our intention to institute any comparisons between the displays of the rival artists who appear in the Exhibition. We may safely say that a more beautiful collection has never been brought together, from the east and from the west, from the north and from the south. The American photographs. Precedence of New York. Beauty of specimens.

Portraits in
excess.

Groups.

Crystalotypes.

Interesting
group.

Panorama of
Cincinnati.

Electro-
photographs.

BARLOW'S
PLANETARIUM.

General
description.

vast majority of the specimens are portraits, and it is to be pitied that more attention is not paid to artistic effect in grouping, and also to the production of landscapes. We notice, in passing along the line of daguerreotype stands, a tableau from Brooklyn, exhibited by HARRISON & HILLS, in which are some pleasing groups and descriptive pictures. The crystalotypes of WHIPPLE, from Boston, we mention as the only examples of the kind. They are taken upon prepared paper, instead of the usual metallic plate.

BRADY exhibits in a collection of admirable pictures, the portraits of Commodore Perry and the officers of the Japan Expedition.

One of the most pleasing examples of the art is contributed by BISBEE of Ohio. It is a panorama of the city of Cincinnati, taken on six extra large plates. Just beyond this, we find some beautiful electrotypes, taken from daguerreotypes by FITZGIBBON, of St. Louis.

At this point we may turn aside for a few moments, to examine the admirable Planetarium, made by THOMAS H. BARLOW, of Kentucky. It is certainly one of the most ingenious and valuable contributions to the scientific department of the Exhibition. This beautiful instrument is about twelve feet in diameter; the outer circle representing the zodiac, and marked with its twelve divisions, and with the days of the month for one year. The sun, earth, and moon, and, the interior planets, are represented. The circumference of an inner circle is divided into one hundred spaces representing years, with an index-figure or point. To whatever year of the nineteenth century this index points, the motions of all the bodies represented will correspond precisely to observations in the past, or to astronomical calculations for the future. The earth

is made to revolve in an ellipse, being several inches further from the sun at the aphelion than at the perihelion. The moon also performs an ellipse and exhibits her nodical transitions in precise correspondence with observation. The constant parallelism of the earth's axis and the changes of the seasons, are most clearly illustrated. Indeed, the apparatus must be regarded as the most felicitous and useful aid to astronomical study of modern times.

Ellipses of the earth and moon.

Changes of seasons.

Returning to the line of photographic tableaux, we may notice the fine cameras of HARRISON ; some beautiful ivory rules by FENN & BAKER, and an orrery, of the old-fashioned kind, by RIKER.

Cameras.

Ivory rules.

Here we enter Court 16 ; and the line of progress we have laid out, will carry us entirely around it. A variety of scientific instruments and appliances now present themselves ; many of them deserving of more particular notice than we can here make of them. An improved coating box for photography ; a beautiful collection of microscopic objects, carefully mounted ; and a great variety of clocks and barometers. An antique clock, made in 1509, carries us back farther into the "good old times" than we should care to go in reality. There are various examples of chronometers in this court, displaying careful workmanship. Two cases, in the centre, belong to the Class occupying the court adjoining. They are books exhibited by Messrs. PUTNAM & Co., and fancy papers by DE JONGE. The former are very beautiful examples of the art of book-making ; in its internal and external features alike. They are still more interesting, as illustrations, of the progress of literature, science and art in this country, being all original American books in these departments.

Court 16.

Scientific instruments.

Microscopic objects.

Antique clock.

Chronometers.

Putnam & Company's American books.

Returning again to the tables beneath the windows, we find numerous displays of optical instruments—the mountings of which vie with the foreign

Optical instruments.

Achromatic
telescope and
microscopes.

examples. A large achromatic telescope, equatorially mounted, by FRITZ ; an elliptic compass ; and various achromatic microscopes by GRUNOW—are among the number of admirable specimens of scientific and mathematical instruments here to be met with.

California's
time-keeper.

An ingenious timekeeper, made by LEUDKE, of California, attracts considerable attention. The works are contained in a vase of silver. The dial and upper parts are of fine gold. The device is Old Time marking the minutes with a wand, while a serpent's head indicates the hours. The last feature impairs the merit of the design. It is a repulsive idea, and by no means necessary to the work. WHITEHURST exhibits eight fine sun-pictures of Niagara Falls. COPLEY has a case of excellent globes. Mathematical and physical apparatus are exhibited upon the tables just to the left, and here we may inspect some white flint telegraphic insulators, which appear to be a great improvement upon any now in use.

Pictures of
Niagara.

Globes.

Mathematical
apparatus.

Telegraph
insulators.

Court 17.

Mathematics
simplified.

Dial of the
Seasons.

Gutta sercha
stereotypes.

Stereoscopes.

Log of the
Savannah.

Clocks.
Gas-burners.

Storm herald.

In the next Court (17) are some brilliantly coloured charts, with the gratifying heading in large letters, "Mathematics Simplified." These were exhibited in the London Crystal Palace, and elicited considerable notice. They are contributed, together with a "Dial of the Seasons," by THOMAS FISHER, of Philadelphia. Gutta sercha moulds and stereo-type plates, form a new example of the vast capabilities of that remarkable material. In front of them are Stereoscopes, by PETERS, and an interesting reminiscence of the past, in the original log of the "Savannah"—the first steamship which crossed the Atlantic—in the year 1819, and the silver teapot presented upon the occasion to Capt. Rogers. SPERRY's clocks, and new patent gas-burners by MAILLARD & Co., with an ingenious electric apparatus for foretelling the approach of storms, invented by ISEN-
RING, bring us to the north-west tower of the Palace.

Here we may observe the patent portable illuminator of the U. S. Gas Company. It is a compact and simple apparatus for producing gas from resin oil to light a private dwelling, a church, or a hotel. The gas obtained is of exceeding brilliancy, and far cheaper than coal gas. In a section of Court 11, PIKE, of New York, has a fine variety of philosophical apparatus, embracing a large air-pump and electrical machine, with various incidental instruments. Just beyond these, is a magnificent air-pump, which its makers, CHAMBERLAIN & RITCHIE, of Boston, justly call the "American lever air-pump." It is beautifully mounted in polished rose-wood. In connection with it, is a freezing apparatus, with which—such is the perfection of this admirable pump—half-a-pint of water may be frozen solid in half-a-minute. Lieut. Maury's Wind and Current, and Whale charts are hung in this recess. Court 11 is chiefly occupied by the rare and costly instruments of the COAST SURVEY of the United States. They are numerous, and to the scientific visitor, full of interest. It would be impossible for us to condense any intelligible account of them into space adapted to the limits of this manual, and as each instrument is inscribed with a brief outline of its uses, we deem it better to attempt no description at all. The visitor should not overlook the beautiful charts which hang upon the walls. The standard weights and measures of the United States, and of France, may be found in this court; also the new scales of the United States Mint.

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Portable gas
apparatus.

Philosophical
apparatus.

American
air-pump.

Ice in half-a-
minute.

Wind and
whale charts.

Apparatus of
the COAST
SURVEY.

Standard
weights.

Mint scales.

Court 5.

Printing
telegraph.

At the entrance of Court 5, beneath the stairs, we find HOUSE's printing telegraph, of which we promised to say something at this point. This instrument, unlike that of Professor MORSE, which writes by arbitrary signs and points—prints its messages in a clear Roman type upon long strips of paper. The

- Principle. scientific operation of the instrument is, of course, similar to all other telegraphs ; its mechanical agencies, however, are vastly different. The operator strikes keys, resembling those of a pianoforte. Each of these keys represents a letter or a figure, and when one of them is struck, the corresponding letter of the alphabet, arranged upon a metallic wheel at the other end of the line, is projected by magnetic force against a strip of paper, fed from a roll.
- Mode of operating.
- Court 10. Here let us retrace a few recent steps, and passing through a section of Court 11, enter Court 10, occupied by the objects of Class xvii. in the Catalogue. Beginning at the right hand, we observe
- Blank books. blank books of plethoric habits ; letter papers ;
- Fancy papers. fancy papers for book-binders' use ; and upon the walls, a variety of maps, and astronomical charts.
- Maps and charts.
- Fine bibles. In a neat glass case, there are displayed some magnificent bibles, printed and bound by LIPPINCOTT & Co., of Philadelphia, who also exhibit in the same case a copy of Schoolcraft's great national work on the
- Book for the Queen of England. Indians. It is inscribed with the initials V. R., and is intended as a present for the Queen of England, who has already received the previous volumes of the work. Moulds, matrices, and types, of metal, from
- Type and moulds.
- Wood type. BRUCE, with specimens of wood type from Connecticut, are found in the same corner of Court 10. In a central case, ROOT & ANTHONY exhibit very fine
- Blank books. blank books ; and just beyond it, is another case, affording some splendid examples of book-binding,
- Elegantly bound books. by MATTHEWS. In the south-west corner of the
- Stationery. court, we find papers ; envelopes ; embossed envelopes and cards ; valentines ; and a complete set of the novels of the late J. Fennimore Cooper. Near a
- Cooper's novels. case of showy books, by DUNIGAN, is an object worthy of special notice. It is a globe, for the use
- Globe for the blind. of the blind, with the boundaries of countries and states, mountains and rivers, distinctively defined to

the touch of the pupil. This beautiful globe is Court 10. the contrivance of W. D. COOKE, Esq., of Raleigh, North Carolina.

The art of book-binding is illustrated in a varied and admirable manner by the specimens exhibited by E. WALKER & SONS in their elegant case. Here are bindings in every modern style, with some very beautiful examples of illuminated edges.

Walker & Sons' book-binding.

The east side of the court remains to be inspected. Here we find some examples of what is called chromo-glypotyphy—a hard name for a new process of printing with types, in various colours—exhibited for the inventor by HORACE GREELY. Mammoth sticks of sealing-wax, are the exponents of DAVIDS' manufactures in that line. Here are TOBIT'S "logotypes," or *words* and compound letters, in metal, for printers; copper-faced type, said to be very durable; pictorial stamps, for book-binders' use, from TOMPSON'S well-known hand; and some very elegant blank books, exhibited by KOCH & Co.

Chromo-glypotyphy.

Sealing-wax.

Logotypes.

Book-binders' stamps.

Blank books.

Court 9 is chiefly occupied by the contributions of Newfoundland; but there are numerous examples upon the walls of the court, and through the adjoining western court, of the arts of painting, engraving, penmanship, colour-printing, and seal-cutting, belonging to the United States department. A glance at some of these will gratify the visitor. Passing down, on the right side of the court, we find various examples of chromo-printing from Philadelphia, where this art has found as yet its best exemplars in this country. DUVAL'S specimens are very numerous, and interesting in the exhibition of the stages of the process, in a picture obtained from nine blocks.

Court 9.

Specimens of the arts.

Printing in colours.

Stages of the process.

We may notice GEO. S. APPLETON'S excellent electro-steel engravings—copies of some of the finest works—obtained by a process which brings them

Electro-steel engravings.

The flowers of Shakspeare. within the reach of the many. Near by, are the flowers mentioned by Shakspeare, represented in a single group, in water colours, by Miss MARY BAL-MANO.

Pen drawings. Among the penmanship examples are exquisite pen drawings, by Miss EDMONDS, of Boston, and DAVIDSON's curious and elaborate works in Hebrew and English text.

Pastel painting. Some pastels, by Miss VAN TUYL, are pleasing specimens of that branch of art. A number of

Medallions. small portrait medallions, in fine composition, are exhibited by ELLIS. WHITNEY, JOCELYN & ANNIN

Wood-cuts. make an imposing display of fine proofs from wood blocks, engraved, by them, from designs by the best artists of New York.

NEWFOUND- LAND. The contributions of Newfoundland are compactly and effectively exhibited in a large case, purposely

Show-case of native woods. left unpainted, to allow of the examination of the woods composing it, as native productions of the island. This collection was made for the Exhibition

Committee. by a Committee of gentlemen at St. Johns, whose zeal and liberality are admirable. The principal

Natural products. objects it embraces, are the products of Newfoundland—its minerals, grain, oils, and furs. The seal

The seal. figures very conspicuously in the collection. Quite a number of the genus are here, of various sizes and

Model of seal fishery. colours—from a tiny white-coat, not more than twelve inches long, to a mammoth fellow almost six

Birds. feet in length. At the bottom of the case is a representation, rudely but picturesquely modelled in

Quadrupeds. plaster, of the seal fishery. Grouse, ptarmigan, owls, ducks, gulls, and bitterns, of the flying tribes,

Dressed furs. and polar bears ; white, red, and crop foxes ; beavers, martens, otters, ermines, and others of the four-footed tribes, illustrate the natural history of the island; while the dressed furs of these animals exem-

plify its industry.

The next point of interest is the space devoted to Denmark—almost the only contribution of which country is, the world-renowned group of “Christ and his twelve Apostles,” by THORWALDSEN. When the lioness was once reproached by a more prolific animal with bearing but a single cub at a time, she replied, says the fable, “Only one—but a lion!” Denmark may point to her Thorwaldsen group here, and say to any who thinks her list in the Catalogue meagre, “Only one—but a lion!”

DENMARK.

Thorwaldsen's group.

A fable applied.

The Denmark Court is semicircular. The wall which skirts it is draped with maroon-coloured velvet, against which the white plaster figures are displayed with fine effect. These thirteen figures were originally placed in the Metropolitan Church, at Copenhagen, and so arranged that the figure of Our Saviour was fifty feet from the Apostles, and quite elevated above them. On this account, it was made larger than the others. Here, the group is necessarily crowded, though not to the loss of a pleasing effect. When the marble figures were completed, they were substituted for these in the church named, and these were sold to Mr. E. BECK, the Danish Consul in New York, who has courteously contributed them to the Exhibition. It was not a trifling work to erect and arrange the figures, but the admirable manner in which it has been done is creditable to all concerned in it. We will briefly name the statues, and the emblem each one bears. Paul holds a sword, as the symbol of his martyrdom. This apostle, who never saw his Lord and Master, is substituted for the unfaithful Judas. Peter, on the other side, carries the keys of power. Simon holds the saw, to indicate the martyrdom he endured. Matthew has the significant money-bag at his feet. In his hand he holds a tablet, to indicate his office of recording evangelist, while an angel kneels by his

History of the group.

The marbles.

Names and emblems.

Paul.

Peter.

Simon.

Matthew.

Bartholomew. side. Bartholomew carries a knife, a token of his
 John. *traditional* death by martyrdom. John, "the beloved
 disciple," seems to be listening to the voice that
 addressed him in the isle of Patmos, saying, "Write."
 James. James, the brother of John, about to set out on his
 apostolic journey, bears in his hand the pilgrim's
 James, son of staff. The other James leans upon a staff. Thomas
 Alphens. holds the square—symbolic of his mind, requiring
 Thomas. exact evidence. Philip, the aged, carries a cross of
 Philip. cane. Andrew holds a parchment-roll, and bears in
 Andrew. his right hand the cross of his martyrdom. Thad-
 Thaddeus. deus bears the axe, the instrument by which he fell
 a martyr to his faith in Christ.

Character of Of these works, we may remark, that the more
 the works. they are contemplated, the grander do they become
 to the understanding.

CANADA. The contributions of Canada, to which we next
 devote our attention, occupy Courts 1 and 2 of this
 Division, and some space in the rear of these courts.
 Number of The Official Catalogue gives us the names of up-
 exhibitors. wards of one hundred and fifty contributions, repre-
 senting nearly every class of objects. Just in front
 of the Denmark Court, is a mammoth threshing
 Threshing machine. machine and separator, as a good illustration of the
 agricultural energy of the Canadians.

Court 1 is divided into two sections. In the
 Carriages and southern part, we find carriages and sleighs of taste-
 sleighs. ful design and excellent workmanship. They all illus-
 trate the manufactures of Quebec. Many beautiful
 Native furs. specimens of furs of native animals are here exhib-
 ited, and, conspicuous in their midst, a sleigh-robe,
 Mosaic sleigh- composed of nearly 10,000 pieces of fur, sent from
 robe. Montreal. A voyageur's bark canoe is suspended
 Bark canoe. above the furs. In the northern half of Court 1,
 passing down on the left-hand, we find, chiefly, exam-
 ples of the produce of Canada; its timbers, maple
 Native products. sugar, honey, hams, vegetable seeds, oils and drugs.

Some of these vie with the choicest productions of [Canada.] any land. Returning upon the other side, we find numerous manufactures of Canada, of its Indian, as well as its Anglo-Saxon, productions. The former Manufactures embrace moccasins, and many small wares, wrought or ornamented by the Lorette Indians ; while the latter are quite numerous and of many classes. A beautiful carpet, made by the ladies of Hamilton, A carpet. adorns this court. Cavalier's boots, snow-shoes, pottery, rope, horse-shoes, and other fabrics, are found Varieties. here. In a recess of Court 8, we may notice some novel metallic splints for surgeons' use, and a few New splints. specimens of the fine arts. An oil-painting, representing the "presentation" of an Indian chief, with Oil painting. original portraits of the principal Indians of Lorette, painted by THIELCKE, of Quebec, has an historical interest.

In Court 2, there are some superb blankets of fine Court 2. white wool, regarded as being superior to those Fine blankets. which took a medal at the London Exhibition, and were sold to the Queen. They are contributed by PATTERSON, of Dundas. Besides various specimens of woollen fabrics and mixed stuffs, we notice in the court, some fine samples of porpoise leather, much Porpoise leather. esteemed for its softness and durability. There are a few specimens of linen manufactures from Canada Linens. East.

It would be difficult to overlook a splendid carpet, Elegant carpet. wrought in Berlin wool, by the ladies of Toronto, like the one in the adjoining court, for the benefit of the church. There are various excellent specimens of embroidery, knitting and lace working to be seen Embroideries. here. The courts fronting on the north nave, except the first and part of the second, contain the woollen and mixed fabrics, and the printed goods of the UNITED STATES. In Court 2, we find some handsome Shawls. and substantial shawls, fine flannels, woollen yarns,

Printed
fabrics.

printed woollens, of superior colours, from the Manchester Print Works, and remarkably fine beaver cloths, from the Union Mills in Connecticut.

Woollen
goods.

Court 3 is almost exclusively occupied by woollen fabrics, from various mills. Blankets, cassimeres, cloths and shawls, indicate the great excellence to which these manufactures have attained in the United States. The black cloths of SLATER & Co. are of remarkably fine quality. Some embroidered blankets, of almost snow-white wool, are found at the entrance of the court. They are from the Bay State Mills, (Mass.)

Fine cloths.

Snowy
blankets.

Dyed and
printed cloths.

In Court 2, we meet with printed and dyed textile fabrics, and the brilliance of the goods here exhibited, affords evidence that our print works are not lagging in the race for improvement. De laines and furniture-cloths, printed with copper shells, woollen-printed lawns, baregees and silks, dyed flannels, and many other examples, are presented in this court.

The four
Divisions
completed.

Our review of the four great divisions of the Crystal Palace is here completed, and a new field of observation invites us.

MACHINE ARCADE,

AND ADJACENT COURTS IN DIVISIONS A AND B.

IN our examination of the East Nave, it will be MACHINERY. recollected that we stopped short at the crystal fountain, leaving that, and all beyond it, to be included with the objects in the Machine Arcade. In like manner, the courts opening upon the arcade in Division A, and containing the carriages of the United States, and the corresponding courts in Division B, containing chiefly English machinery, were left for subsequent inspection.

We propose now to enter upon that important Starting point. field of observation ; and for that purpose, we must make our way to the very spot where we turned our steps in the East Nave, beneath the crystal fountain.

This fountain bears no resemblance whatever to THE FOUNTAIN. the *jets d'eau* of ordinary fountains. In the latter, the water rises to the level of its source. In the crystal fountain the effect is produced by machinery. The fountain is a cylinder of perhaps twelve feet in height and two feet in diameter, over the flanged edge of which a body of water is made to flow with great force in the shape of a dome. The fountain is enclosed with glass to confine the spray. The effect is produced by a pump within the cylinder, called Gwynne's Centrifugal Pump, which is put in Gwynne's Pump. operation by the steam power of the Arcade. The water flows back into the reservoir, and is again thrown into the cylinder, to be in like manner returned to the reservoir.

English
machinery.

Here let us avail ourselves of a suitable occasion to inspect the English machinery courts, which open at this point, Division D. Passing into the section which embraces Courts 23, 24, 25 and 26, we find upon our right hand a variety of machines of large size and massive appearance, designed for working in iron. They are not in operation, and do not, therefore, attract the attention which they merit, as examples of the excellence of the English machinery employed in iron manufactures. The names and purposes of these machines are stated in the Official Catalogue, Class vi., of Great Britain.

Whithworth's
iron
machines.

Agricultural
implements.

The next group of objects embraces the agricultural machines of Class ix., exhibited by CROSSKILL. They are formidable looking implements, especially the patent "clod crusher," and the prize-medal "iron harrow."

Sheep-
washing
apparatus.

The sheep-washing apparatus of MR. BIGG, would be vastly interesting if we could witness its practical working. It is said that, with the assistance of five men, it will wash five hundred sheep in one day. The culture of wool is not sufficiently general in this country to make our people familiar with this process.

Bolting mill.

BLACKMORE'S bolting mill exhibits improvements in bolting cloths.

Cotton
machinery.

We have been passing, on the left hand, a long range of beautiful machinery for cotton mills, the patent roving and slubbing frames, exhibited by MASON, of Manchester. These are sometimes put in motion.

Ladies'
saloon.

The southern refreshment saloon, distinguished as the *Ladies'* saloon, opens at the end of the machine courts of the British division. At this point we may advantageously pass over the space which intervenes the line of the Machine Arcade. Many of the objects here are rather important than attractive, and we pass stoves, and ranges, and boiler-flues, with a bare glance.

We may linger a few moments to inspect O'NEILL'S plan for an elevated or balcony railway in Broadway, which, with half-a-dozen models of bridges, may be found in this section, though belonging to Class vii. of the United States.

Balcony
railway for
Broadway.
Models of
bridges.

The stocking-knitting machine of JACQUIN, from Brussels, may be found in this section, and its curious operation will well reward our notice. A stand, upon which are displayed varieties of American woods, may be found just beyond the stocking-machines.

Stocking
knitting
machine.

American
woods.

Re-entering the nave, we may inspect the various sewing-machines, placed to the east of the fountain. There are several of these, by rival exhibitors, the comparative merits of which we are neither competent nor required to determine. They are sufficiently represented by agents and circulars, to justify us in passing them without further remark. The visitor who desires to do so can obtain a specimen of any of the various kinds of work performed by these steel and brass automata! The two mammoth printing presses, stretching back to the Machine Arcade, are employed much of the time in printing the Official Catalogue, and the Illustrated Record of the Exhibition, under the superintendence of J. F. TROW. The first is what is termed a cylinder machine, designed for rapid printing, and the other a platen press, with which better work is done than with the cylinder, but at a lower rate of speed.

Sewing
machines.

Printing
presses.

Cylinder
press.

Platen press.

We are now brought to the verge of the Machine Arcade, at a point midway of its length, and our course will be towards the north extremity upon the left side. The machinery of the United States is catalogued without reference to the Official Classification, which places direct machines in Class v., and indirect machines in Class vi. The two classes are united, and the number of exhibitors in both, exclusive of CARRIAGES, is 438.

Entering the
ARCADE.

Classes
v. and vi.

Machines not
noticed.

Of many of these machines we shall say nothing at all in this manual, either because they are their own best exponents, or that they have no peculiar claim to notice, in a work which aims to conduct the visitor, without needless delay, through the Exhibition.

Our aim.

It is obviously impossible that the principles upon which machines are constructed, should be discussed here. Our purpose will be to point out the more important and novel objects before us.

Hydraulic
machines.

The first class of machines which we observe, on the line of our advance, is properly termed hydraulic. It embraces pumps, of all descriptions, for raising waters from the deeps, or for forcing it to the heights. We should find it a tedious task to inspect all these in detail, for their name is legion. From the little hand-pump to the formidable hydraulic ram, they are before us, spouting or pouring incessantly.

Line of
march.

Let us pursue the line of the wall where it turns to the north-west, and we shall presently come to

Circular saw.

BEMIS'S circular sawing machine; a thin flexible blade of steel, with which the operator can cut any curved or circular figure at his will. In a twinkling he will furnish you with a figure of eight in wood, the work of his obedient saw. We may now notice upon our right hand TRAPP'S patent machine for making barrels, from a white lead or powder keg, up to a huge wine cask. It is a very ingenious machine; taking blocks of wood and sawing them into staves, and then putting them together, heading and hooping them completely.

Barrel
machine.

Stone-
dressing
machine.

The next point of prime attraction is at GREELY'S machinery for dressing any description of stone. It shapes and moulds blocks of free-stone or marble for cornices, with great rapidity, and as efficiently as hand-dressing.

A rotary engine, invented and exhibited by BAR-

row, has been applied to a small boat with a considerable degree of success. A similar engine, of large size, is now propelling a passenger boat on the Passaic river, which it is said can run twelve miles in an hour. Rotary engine.
One in use.

That ponderous machine which appears to have sunk through the floor, is Dick's "boiler plate shears," for cutting thick sheets of cold iron. It is capable of cutting a plate more than half an inch thick, as we cut card-board with a pair of scissors ! Iron shears.

We may examine with interest, at this point, one of the most beautiful steam engines ever made in this or in any country. It is called "*The Southern Belle*," a name which indicates its origin. It was made at the Winter Iron Works, at Montgomery, in Alabama, and does credit to all concerned in its construction. It is of thirty horse power, and so elaborately finished that it cost \$7000. "Southern Belle."

We have now arrived at that part of the Machine Arcade, where the "primum mobile" of its multifarious processes is to be found. Before us are the two powerful steam engines which propel all the machinery that is put into motion, except by hand. The first of the two, which carries the western line of shafting, is a horizontal double cylinder engine, made at the Lawrence machine shop, (Massachusetts.) The other, connected with the eastern shaft, is a beam engine, made by CORLISS & NIGHTINGALE, at Providence, Rhode Island. They are both sixty horse power engines, and so perfect is their operation that they produce scarcely a sensible tremor in the floor of the Arcade. It is interesting to stand and see these two ponderous engines, and the beautiful "*Southern Belle*" by their side, all together in motion ; the huge fly wheels revolving, and the polished arms, levers and beams reciprocating. Driving engines.
Double cylinder engine.
Beam engine.

The "poetry of motion." ing with the very sublimest "poetry of motion" our imagination can comprehend.

Rock drill. We now pass around these engines to inspect a mammoth rock-drill—a vast steel augur propelled by steam, to bore holes in granite or other rocks, a striking exemplification of the *power* of machinery.

Wood working machines. In the rear of the instrument we may find machines for planing, tongueing and grooving, and for mortising lumber for building purposes. The careful housewife will not be induced to pass, without notice, KING's patent washing machine—an ingenious contrivance, by which, without rubbing, five or six dozen soiled garments are cleansed in the space of five minutes, by the agency of steam. It is truly a labour-saving machine, and considering the *desagrémens* of "washing day" in the house, it might prove also a great *temper*-saving apparatus.

Rotary engine. As we return to the main passage, we may notice upon our right hand Bristol's rotary steam engine, and upon the left, a curious model of what is called a "revolving piston engine," in which the crank motion is entirely dispensed with. Of the same class of inventions and novelties in the application of steam power, is PEASE's "rotary piston engine," for producing direct and continued motion.

Sugar refining mill. A centrifugal machine for refining green sugar, may be seen upon our left hand as we proceed up the Arcade. It is in motion, but the cleansing process can only be conceived of, in the absence of the raw material for it to work upon. The machine consists of two revolving perforated drums of copper, into which the green sugar is put. The molasses percolates the drums, and is discharged below; the sugar, in five minutes, remains dry in the drums.

Smut machine. A smut machine and a new samp mill will stop the farmer, while others pass on to see MOWREY's stave cutter. stave machine cut a block of wood into half a dozen

finished staves in a very few minutes. Just across the passage, is DICK's boiler punch, a powerful machine for punching holes in boiler iron ; and next to it, with its everlasting trip, trip, is a gold-beater's hammer. Observe how the iron fingers which hold the skin and its golden enclosure, shift it beneath the blows of the sledge, and every few moments turn it completely over.

Boiler punch.

Gold beater.

Opposite to these is a machine for mortising wood, and another for cutting the fellys of wheels, while upon the right hand again, we observe extensive machinery for breaking and dressing flax, an interesting process, which the visitor will do well to witness.

Mortiser.

Felly cutter.

Flax brake.

An atmospheric governor for valves, contrived by TREMPER of Buffalo, acts upon a very simple principle, and seems to be both efficient and economical. Very few will look without interest at HUTCHINSON's stave and barrel machinery, including the stave-cutter, the stave-joiner, the crozer and the header, with which contrivances a neat barrel is very soon turned out of a rude block !

Valve governor.

Stave and barrel machine.

The cotton-gin is a machine employed to separate the seed from the fibre of the cotton plant, a process absolutely essential to the preparation of cotton for the market and for the factory. CARVER's gin, which we now observe on the right hand, is very highly esteemed by planters as a rapid and clean operator. A specimen of the cotton plant, with its bolls ripe and bursting, is here displayed. A large field covered thickly with such plants, in the flush of the cotton harvest, is a most beautiful sight, resembling in its brilliancy a snow-clad meadow.

Cotton-gin.

Cotton plant.

Passing a variety of machines, for sawing and planing wood, we arrive again in the region of hydraulic apparatus. Just before us, is GWYNNE's celebrated centrifugal pump, which we mentioned in

GWYNNE's pump.

connection with the fountain, in the east nave. It is said to be capable of discharging 1000 gallons of water every minute.

Proceeding northward, we may notice the new patent rotary pumps, exhibited by CARY, remarkable for the beauty and uniformity of their operation, and for their surprising power in lifting water, and in projecting it to great elevations.

Two or three hydrants, of different construction, present themselves among other hydraulic instruments. That of COCHRAN has novel features, and possesses real excellence, since it will economize water, and lessen, or obviate, the injury done to the foundation of buildings by those commonly in use.

Beyond the iron-shaping engines of the Saco Water Power Company, are curious machines for setting and distributing type, invented and constructed by DELCAMBRE of Paris.

A printing press of new construction, from the West, is followed by a lithographic press, kept in operation by LAING, in colour-printing, or as it is technically termed, chromo-lithography. A separate stone is employed for each colour, and the difficulty of this art, especially in delicate and many-coloured work, is in obtaining and maintaining a perfect register; that is, such an adjustment of each stone, as to make the effects of all harmonious.

An ingenious little instrument, called a "Typographer," is exhibited by JONES. The letters of the alphabet are projected from a disc, and by some simple arrangement, envelopes and cards are printed with scarcely less dispatch than they could be written. Lawyers could print their deeds by this instrument, or small hand bills could be struck off.

A machine for ruling letter and account paper, now presents itself to notice; and next, we find a press for making plugs of tobacco. This is one of

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the most ingenious machines in the Arcade, taking roll after roll of leaf-tobacco, and delivering them in shapely plugs, at the rate of twenty in a minute. The leaves are gummed before they are put into the hopper, to make them adhere firmly in the plug. The machine cleans itself after each plug is compressed. It is patented by PARKER.

Tobacco
plug press.

Observe now, to the left hand, two ingenious and important machines, invented by WYLLYS, and exhibited by COLLINS of Connecticut. The first is a roller-cot machine, and such is the beauty of its operation, that it well deserves the title of "Automatic" which has been given to it. Roller-cots are small cylinders of leather, employed to cover the speeders of cotton mills. Upwards of thirty thousand are consumed every day in Massachusetts alone, and hitherto these have been all made by hand. This ingenious machine cuts the leather, bevels its edges, applies warm cement to one of them, bends the strip into the cylindrical form, presses the edges together, and then deposits the cot in a basket connected with the machine at the rate of ten per minute.

Roller-cot
machine.

Roller-cots.

Ingenious
process.

The other machine is, perhaps, still more important to cotton manufacturers, its object being to equalize the *sliver* in drawing cotton, so as to produce perfect evenness of the yarn in every number. This it accomplishes in a very ingenious and satisfactory manner.

Machine for
equalizing
cotton yarn.

We have now arrived in that part of the Arcade, where the spinning machines and looms are placed, and the noise of their combined motion is often enough to distract weak nerves. These unpleasant appendages should, therefore, be left behind by those who visit this department. Here are looms and spinners of every description, and they whirl, and whiz, and thump, and bang, with delightful unanimity. One may aptly exclaim with the poet, describing the

Spinning
machinery.

Weak
nerves.

Sensations. effect produced upon him, by contemplating Purbeck's theory of the crystal spheres of Ptolemy—

“Within my ears I hear a sound
Of fifty mill-wheels whirling round.”

Cop spinner. It would be a tedious task for us to indicate the separate machines of this part of the Arcade. The frame, known as DODGE'S Cop Spinner, is conspicuous among them, while on the left, is the loom of the Ames Company at Chicopee, for weaving gingham. Many of the looms are in constant operation, and have obliging attendants, who are ready to explain and illustrate their mode of operation.

Gingham loom.

Continuing our steps southward, we notice machine bands, machine card-clothing and weaver's reeds, essential parts of cotton and wool machinery.

Shoe pegging machine.

A percussive shoe-pegging machine, is one of the novelties of the Exhibition, for which a patent has just been issued to its inventor, GALLAHUE. It will peg a number six shoe in a single minute.

Memorial of the past.

An object of interest, close under the wall of the Arcade, should properly detain us for a moment. It is the identical cylinder which played so important a part in the first steam voyage ever made across the Atlantic—the cylinder of the “Savannah.” It looks rough and weather-beaten, by the side of its young cousin, a cylinder of an oscillating beam-engine, but recently made at the Allaire Works ; yet it did good service in its day, and we pay it now a tribute of respect !

Cylinders old and new.

Models.

We have now reached a table, closely covered with models, quite “too numerous to mention.” Here are bizarre contrivances, called “multiplying gear,” in which the wheels reel and *wabble*, as if they were all intoxicated. Among many larger objects, let us not overlook a Lilliputian steam-engine, which is set in motion by a breath.

Lilliputian engine.

The manufactures of India rubber and gutta percha are displayed at this point. It is truly astonishing to witness the variety of articles now made from these materials. The display embraces not only garments and shoes, but toys, brushes, combs, knife-handles, canes, boxes, and even a cabinet closely resembling ebony! All these are made of vulcanized caoutchouc, or India rubber curiously combined with sulphur.

India rubber manufactures.

Vulcanized rubber.

Our inspection of these remarkable goods has carried us around the south end of the Arcade, and past the open door of the Mineralogical Cabinet. It is well, perhaps, that we leave it for subsequent examination, and proceed along the west line of the Arcade.

Mineral Cabinet passed.

The Glendon Rolling Mill displays iron in its various styles of manufacture, and plates and bars of rolled and drawn iron. Further on, we find steel axles, and springs, and railway-carriage wheels. A neat loom, to be worked by *hand*, dares to show itself amid its rivals, which depend on *power*. Of these, a beautiful model is here displayed—it is REYNOLD'S patent power loom. It takes a larger machine to make ship-biscuit and crackers, than one would imagine, before seeing one in operation.

Iron works.

Springs.

Hand loom.

Power loom.

Cracker and biscuit machine.

The idea of paging blank-books by machinery, is of modern origin; but now, all manufacturers adopt some such method. An ingenious instrument, for this purpose, is here exhibited; the numbers moving in succession upon an endless band.

Paging machine.

Passing, with somewhat quickened pace, along the Arcade, with a glance for the "rag-picker," the hydraulic press, a beautiful cotton-gin, a power churn for making ice-cream, a gold washer, and a nail machine, we linger a moment at the type-casting machine, exhibited by JOHNSON & Co. of Philadelphia. See, how fast the bright and slender letters

Various machines.

Casting type.

drop from the matrix—and *they* are the true levers, after all, with which the world is moved !

Brick
machines.

Among models of brick-making machines, there is one exhibited by SANDS & CUMMING, of Washington, the operation of which is very ingenious. It tempers the clay, and moulds six bricks in five seconds.

Bonnet
presser.

The hat and bonnet press, exhibited by Mrs. DOWE, attracts attention from far more portentous machines. It is really a very useful and economical contrivance. The electro-magnetic machine of Professor VERGNES is not in operation—as we could wish it were—that this novel and much talked-of motive-power might be made intelligible to the multitude.

Electro-
magnetic
engine.

End of the
Arcade.

Here we find our rapid survey of the machine department of the Crystal Palace completed. The hour we have given to it, has sufficed only to bring its chief points before our notice. We have, of necessity, overlooked meritorious contrivances, either wholly, or in part, novel. A volume would be required to catalogue with descriptions—however brief they might be—the really useful machines upon exhibition. We have done no intentional injustice to any one in omitting to point out his especial contrivance, and have felt at every step of our progress through the Arcade, the want of space, not there, but in our humble Manual !

Omissions.

Want of space.

CARRIAGES.

In the Official Catalogue, carriages are classed with direct machines. They have been placed, therefore, in courts contiguous to the Machine Arcade, and directing our steps to Division A, we will now make a rapid tour of those courts.

Variety of
styles.

The Catalogue gives us a list of about twenty-five contributors, and they send nearly all descriptions of vehicles—from the omnibus, “licensed to carry fourteen,” but compelled, upon occasion, to carry *twenty-four*—to the “dog-cart,” so called for its ex-

treme lightness. Several of the carriages are of exceedingly elegant finish, both inside and outside, and comparisons between these would be "odious."

We notice particularly the "Gazelle wagon," as having been an object of attraction at the great London prototype of our Crystal Palace.

The "Gazelle wagon."

The novel style of springs applied to HUBBARD'S carriages, makes them also justly objects of our notice. Their elegant buggy, and those of MINER AND STEVENS, and of SMITH AND SON, are really beautiful examples of elegant and yet substantial light vehicles for the road. The beautiful sleigh, in the interior of the courts, kindles our imagination with thoughts of the snow, sparkling in the winter moonlight, and of the fleet steed spurning it beneath his flying hoofs, as we put him, nothing loath, to his mettle, upon a well-beaten track !

Novel springs.

Elegant buggies.

A sleigh and its suggestions.

Making our way back to the nave, and crossing it in front of the fountain, we seek the south-eastern stairway, close by, which will conduct us into the galleries of the Palace. These do not correspond, in shape, to the divisions below, but extend over the portions of the building within the cross proper; and also, at each extremity, project over the naves. It will be intelligible enough, however, to those who have followed this Manual, if we designate each by the same letter which is attached to the division beneath it—as Gallery A, Gallery B, &c. We cannot, from the shape of the galleries, pursue them, without loss of time, in the same order which marked our progress on the floor, but shall be obliged partly to invert them. Beginning with Gallery B, we shall pass into C ; thence into D ; and, finally, completing the tour, through A, we shall come back to the entrance of the Picture Gallery,—whence, also, we shall now *start* upon our round.

Re-enter the nave.

Gallery divisions.

Designations.

Mode of progress.

GALLERY B.

GREAT BRITAIN AND IRELAND.

- The Gallery.** ASCENDING the stairs on the South side of the East nave, and opposite the busy printing presses of the Palace, we find ourselves in the gallery over Division B ; which we have, with deliberate care, chosen in preference to beginning with Gallery A, and moving in an opposite direction around the Palace. On our left hand, crowd the agricultural implements of the United States ; but we heed them not. Our path lies straight before us, towards the dome : upon one side, the light iron railing of the gallery, with its drapery of red cloth, and upon the other, a beautiful display of Irish and English lace fabrics, embroidered cambrics, and other examples of ornamental needle work.
- Our course.**
- Surroundings.**
- Mysteries.** We are not sufficiently versed in the mysteries of crochet, guipure, and *applique*, to venture upon particular descriptions of the exquisite fabrics which are here spread and hung before us. The ladies, who will be most interested in this section, are abundantly able to appreciate their excellence, and will not, as we might do, mistake a founce for a scarf ; or worse still, fail to discriminate between crochet and *point d'applique*.
- Interest for the ladies.**
- Irish lace.** The manufactures of Ireland, in this graceful department of industrial art, are beautifully represented in the first case which we examine—that of Messrs. HIGGINS & Co.—whose laces and embroid-

ered muslins are the admiration of all visitors. We are not able to say how much the envy of fair visitors is excited by the good fortune of Mrs. President Pierce—as the donee of the beautifully embroidered cambric handkerchief—displayed in front of their case.

The next case will, in no wise, abate our satisfaction with Irish laces and embroideries. Limerick lace—judged by the examples before us—may vie with the finest fabrics of Brussels. The next specimens are from England—by direct and indirect contributions, and are of great beauty, both in design and execution. All these objects belong to Class xix., and so also do the various carpets which hang from the girders along the passage of this gallery, and of which beautiful specimens are exhibited by HENDERSON & WIDNELL, of Scotland.

We must not pass too hastily a case containing specimens of embroidery in various styles by children of the Industrial Poor Schools, in Ireland ; and also Limerick lace, from the famous manufacturers, LAMBERT & BURY, of Limerick. The fine sewed muslins of HOLDEN are at the end of the first passage, and we turn immediately to traverse the second passage, observing that the objects we notice are upon our left hand—unless by marked exceptions.

We are now in a wilderness of sewing cotton. The spools are thick as leaves in Vallambrosa, and some of them are fanciful enough to make us look closely ; especially that mammoth *reel* with a glass medallion upon its head, exhibited by CLARK.

A pair of socks, knitted by a sister of the Ayrshire poet, in her eightieth year, is a curiosity enough to attract our notice. The leisure of conventual existence, is proved by the numerous embroideries and fancy needleworks of the Sisters of Mercy, belonging to the Kinsale Convent in Ireland. Of

Irish muslins.

Limerick lace.

English fabrics.

Carpets from Scotland.

Works of the children of poor schools.

Fine lace.

Sewed muslins.

Sewing cotton.

Mammoth spool.

Pair of socks.

Conventual needlework.

More spools. cotton spools, the cry is "still they come;" and we
 Hosiery. pass them to notice a large display of hosiery from
 that world-renowned city of looms, the English Not-
 Chamois leather. tingham. Fine samples of chamois leather are ex-
 hibited by BAILEY & SHAW, of the same place.

The next object which we discover is a knitted
 Fine scarf scarf of unbleached linen, containing, says the re-
 cord, three and a half million of stitches, and yet
 weighing only five and a half ounces! It is cer-
 tainly an extraordinary piece of work, and was
 wrought by a young lady of Ireland.

Returning on the opposite side of the passage, we
 Bonnets. notice bonnets; ornamental hair-work, Coventry
 Hair-work. ribbons, embroideries in Berlin wool, and neat little
 Ribbons. doyleys, etched with views of Irish ruins. These
 Etched doyleys. are followed by Honiton and other laces, from Not-
 Honiton lace. tingham, in two contributions; and beneath all
 these successive objects, McDONALD & Co. display an
 immense assortment of Scottish worked muslins and
 Scottish worked muslins. cambrics, insertions, &c. The fair visitor would not
 pardon us, if we failed to call her attention to that
 Fine lace flounce. exquisite and costly flounce of real Honiton, imported
 by JAFFRAY of New York, and valued at a round
 thousand dollars.

Sewing cottons, hosiery, ribbons, and laces, em-
 Various fabrics. broideries in crochet and other styles, form the
 sequents of the passage. We turn into another at
 Hosiery. the hosiery case of JOHNSON & Co. of Manchester,
 and now find ourselves among the objects of
 Class xvi.

Mats and rugs, of goat and lamb-skins, and vari-
 L. mbskin n its and rugs. ous styles of leathers, are extensively displayed by
 Leathers. two manufacturers of London. Beyond them we
 find a novelty in the shape of a shoe, made without
 Sewed shoes. sewing or pegging, the sole being neatly screwed to
 the upper leather!

A fancy vest of crimson satin, under black lace,

might be taken for a precious relic of the times of the magnificent Louis ! A good example of silk embroidery is afforded in a screen, by Mrs. DITL, of Dublin.

Silk screen.

The other side of the passage presents to our notice an extensive display of coach trimmings, which are followed by a class of manufactures—novel in England and to us—fabrics of the cocoa-nut fibre. This fibre is exceedingly strong, and yet flexible, as the beauty of numerous examples demonstrates. There are three extensive contributors, all of London ; and they send mattings and door mats, lines and brushes. In one case the fibre is exhibited in its natural state and in stages of manufacture. Immediately following these, are specimens of hemp carpeting and matting, remarkable for their strength and neatness.

Coach lace.

Fabrics of
cocoa fibre.

Door mats.

Hemp
carpeting.

A panorama of linen threads now opens before us, each successive part of the picture supplying some lack of the others, and showing altogether the extent and excellence of the British manufactures of fine thread. Turning into another passage around TAYLOR & Co.'s stand of perfumery and toilet soaps, we find ourselves among the scientific contributions of Great Britain. These, though various, exhibit no peculiar degree of novelty or excellence. The reputation of the best English watches is, to be sure, unrivalled ; and of these, there are some examples in the chronometers, watches and movements of two or three London watchmakers. FRODSHAM's regulator clock, and JOHNSON's and CORDEROY's watches, will bear minute and critical investigation. The optical instruments are represented by a fine achromatic telescope of fifty-two inches, from GODDARD ; and some excellent achromatic microscopes and polished lenses from SOLOMON. The small examples are eye-guards, lorgnettes, stereoscopes, and

Linen
threads.

Perfumery.

Scientific.

English
watches.Optical
instruments.Telescope
and
microscopes.

Stereoscopes.

Silver
embossing.

spectacles. Some very beautiful examples of embossing in silver or gold plate, are exhibited by PENNY. This is an ancient art, and consists in *beating up* a plate to an artistic design.

Anemometer.

The anemometers, manufactured by DAVIS, are small instruments ; but they have an important office—viz., to measure and register the quantity of air circulating through the shafts and galleries of coal mines, and particularly of deep mines of bituminous coal, such as are found in England.

English
photography.

Four large daguerreotype views of the interior of the London Crystal Palace, by MAYALL, are fine examples of English photography.

Surgical.

Glancing at various surgical appliances, and at the models, of many kinds, furnished for pupils by the Department of Practical Art in England, we arrive at some contributions of the famous Tunbridge ware.

Tunbridge
ware.

Some of these are exceedingly curious and elaborate works. Of these, we notice particularly, a chess table containing the incredible number of two hundred thousand pieces of natural coloured woods.

Mosaic
chess table.

Safety lamps.

Three different varieties of safety lamps, for the use of miners, illustrate at once the terrible necessity for precaution against the foul air of deep shafts, and the triumphant skill of science in devising such precautions, in all ordinary circumstances, infallible in their efficiency.

Invalid bed.

STURROCK'S invalid bed, seems to be well adapted to its purpose of affording all possible comfort to the sufferer.

"Old
Windsor"
soap.

A pleasing aroma is here inhaled from masses of real "brown old Windsor" and other fine soaps. One cannot help regretting to see here the *debris* only, of what doubtless was—when it left London—a full model in glass of the London Crystal Palace. Against the windows of the building the visitor will observe various examples of stained glass ; chiefly

A ruin.

Stained glass.

of scriptural subjects. They display great brilliancy of colour, and are not deficient in artistic merit. Fine colours.

Artificial flowers, once admirable specimens of their kind, and a grotto of shells, are to be found at the point. They are followed by some naval models; these, by saddles, and we notice then, wooden trenchers, with carved and inscribed borders, fancy boxes on carved wood, and other neat and useful objects, the work of *deaf mutes* in Ireland. Flowers.
Shell grotto.
Saddles.
Trenchers
made by deaf
mutes.

An interesting display is here made by the London Society for teaching the Blind, of embossed books, music, maps, and geometrical figures; also, of games for their amusement. These are followed by a collection of objects made by the blind. Some unique examples of transparent drawings, and of cutting pictures in ornamental papers, will repay a moment's notice; and, close by them, are numerous samples of paper, with ornamental and artistic water-marks, devised for security against forgery, and manufactured by SAUNDERS of London. Instruction
for the blind.

Unique
drawings.

Water
marked
papers.

Maps, mathematical and drawing apparatus, globes, compasses, and barometers, are further examples of the scientific contributions of Great Britain. Maps and
apparatus.

Here let us bend our steps to the right, as if to examine the beautiful Axminster carpet, which hangs over the staircase, and proclaims the combined elegance, taste, and durability of those famous fabrics. Our real object is, however, to pass through the little court below it, hung on one side with textile fabrics, and upon the other displaying ornamental works. Beyond a silver and crystal fruit-stand, is a case containing unique and beautiful manufactures of Irish bog oak, and of horse-hair. The former is a black and fine-grained wood, which is susceptible of a high polish, and when carved with skill, is exceedingly beautiful. A case of malachite and silver Axminster
carpet.

Bog oak and
horse-hair
ornaments.

Church
silver.

Antique
binding.

Tara
brooches.

Fine medals.

Irish wood
carvings.

Connemara
marble.

Plated ware.

Silver ware
by Angell.

Its excellence.

Halt in the
Desert.

Sir Roger de
Coverly.

Æsop wine
service.

Garrard's
silver ware.
Candelabra.

ornaments, is followed by SKIDMORE'S church metallic wares, as silver sacrament chalices, &c., with examples of antique binding, in velvet and gold.

The ancient Tara brooches of Wicklow gold, ornamented with Irish pearls, are beautiful and curious examples of the jeweller's art.

The fine display of medals, by WYAN, chief engraver to the Mint, will reward our minute inspection. In another case, we have further specimens of bog-oak carvings, including an Irish methen, or ancient drinking cup. Ornaments in horse-hair, and in the beautiful green marble of Connemara, add interest to this contribution from CORNELIUS GOGGAN of Dublin.

Passing a stand of showy silver plated ware, from Sheffield and Birmingham, we turn to the right, and approach the beautiful case of silver ware contributed by ANGELL of London. We are now to inspect a series of contributions, which do credit to the world-wide, and almost immemorial, fame of the London goldsmiths. Regard these works how we may, whether for massive splendour, or airy lightness, for artistic beauty and design, or skill in mechanical representation, they are unrivalled by any in the Exhibition.

The case before us contains some works of exceeding beauty. Besides the great central group, illustrating the "Halt in the Desert," which contains 400 ounces of pure silver, and another beautiful group of Sir Roger de Coverly and the Gipsies, there is a wine service in silver, with illustrations from Æsop's fables, in alto-relievo, which the visitor will do well to look at closely, as he arrives presently on the opposite side of the case.

What we have said of Mr. ANGELL'S contributions, is true of those of GARRARD, in the next case, on our right hand. That splendid silver candelabra, in the

centre of the case, is by no means the only remarkable work in the collection, which embraces the fine group in silver, in an adjoining case, commemorating the "Landing of the Pilgrims." The Swiney prize cup, tells its own interesting story. Who shall be the fortunate possessor of that and of its golden contents, time only can disclose. The prize may well stimulate the ambition of our legal sages, as well as that of the British bar and bench. The silver cup, won by the yacht "America," and a case of electro-plated ware from London, have drawn our steps to the edge of the gallery, where a fine view, of the interior of the building, will reward us for a brief pause, the more refreshing, that we inhale the delicious aroma diffused from the fountain of toilet vinegar, which is playing behind us, amid the choice perfumery of RIMMEL of London.

Landing of
the Pilgrims.
Swiney prize.

Prize cup of
the yacht
America.

Fountain of
toilet vinegar.

Repassing, on the inside, the cases of GARRARD and of ANGELL, we come next to the extensive cases of ELKINGTON & Co. of London, in which they exhibit, by far, the finest examples of electro-plated ware we have ever seen. First, we pass the table of electro-deposited bronzes from the antique. Then we have specimens of all descriptions of useful and ornamental table ware of new designs obtained by the modern and beautiful art of chemical or electro-plating.

Electro-
plated ware
of Elkington
& Co.

As if the eye could not grow weary of seeing examples of costly art, we have, still beyond, the unsurpassed display of HUNT & ROSKELL, extensive, magnificent, and varied. It embraces two massive testimonials, of elegant workmanship; but its crowning work is a centre-piece and candelabra, in solid silver, embellished with nine classical groups in white silver.

Hunt &
Roskell's
splendid
silver ware.

Two curiously minute working engines, exhibited by WARNER, of the Polytechnic Institution in London, attract the gaze and wonder of nearly all visit-

Miniature
steam
engines.

ors. One of them has for its base, a silver 4d., of English currency.

German organ.

Turning our steps northward, we arrive at an organ of new construction—a truant from its own department, in the musical court of Germany. The peculiarity of it is twofold: the pipes are horizontal instead of perpendicular, and are served by a compensating or alternating bellows,—in working which, the use of the lever is dispensed with. It is contributed by HECHINGEN of Wurtemberg, and combines power with great sweetness of tone.

Peculiarity.

British earthenware.

We proceed now to the inspection of the British earthenware, which, in its multitudinous examples, occupies a large space in this gallery. The Staffordshire potteries have acquired a wide celebrity for the excellence of their productions, which are diffused over this Western Continent, as well as through many parts of the Old World.

Potteries of Staffordshire.

Varieties of clay.

There are several varieties of clay used in the manufacture of earthenware in England. The best, for the production of the finer varieties of china, is the Cornish clay, which is a decomposed felspar of the granite, obtained abundantly in Cornwall.

Cornish clay.

Great progress.

In no department of industrial art in Great Britain, has there been a more rapid and striking improvement, within a few years past, than in this; and although her ceramic productions may not rival, in delicacy and beauty, the porcelain fabrics of France, and Saxony, and Prussia, they afford examples of far greater adaptation to the demands of every-day life, than the costlier and more elaborate works to which we have alluded, and of which there are numerous examples in the Exhibition.

Classes xxv. and xxvii.

The English potteries are represented here by about twenty-five exhibitors, including those of the two Classes, xxv. and xxvii. Some of them are met with in the Division below, and of the others,

the testimony is around us. Very numerous specimens of earthenware, in its finer forms, are exhibited by Messrs. MAYER of Longport. Passing on the left of their tables, we observe plain and ornamented china ware, and Parian figures. At the extremity of the table are painted china slabs, for fire-places ; and here we are surprised to find objects that we might be pardoned in mistaking for old stumps, smoothly sawed off for seats, but proving, upon examination, to be made, like the multitude of wares around us, of clay !

Fine qualities of ware.

China slabs.

Earthenware stumps!

We must here interrupt, for a moment, our observations in the ceramic manufactures, to glance at the extensive display of fishing tackle and archery implements, made by AINGE & ALDRED of London. A case of very handsome whips and walking-canes is exhibited by SWAIN & ADENY.

Fishing and archery.

Whips and canes.

Traversing a passage under the windows of the building, we have the wares of MAYER upon our right hand, and are presently introduced, upon the left, to further specimens of the Staffordshire china, from various manufacturers. The painted and *bisque* ware of PRATT ; the Parian vases, in blue and white, of BOOTE ; examples of majolica ware, for garden uses, as vases and seats, (to be found upon the tables on our right,) and an almost endless variety of other earthenwares, pass under our eye. The sight of a table, laid with plates and dishes, naturally suggests a feast ; and it happens—we do not charge the Superintendent of this department with having practised an intentional piece of waggery—for we say, it happens, that at the end of the table, among china and glass ware, we have the tokens of a *feast* before us ! A very tempting array of pickles, prepared by FEAST of London, have, somehow, strayed from their proper court, and present themselves here.

Staffordshire china ware.

Bisque.

Parian vases.

Majolica ware.

Tokens of a feast.

The numerous and beautiful manufactures of

Minton & Co. MINTON & Co., of Staffordshire, here occupy the large corner upon our left hand ; and, in passing around the court, we find much to admire. The dessert service, in porcelain and parian—so temptingly displayed in the centre, and already sold—is similar to one exhibited at the London Crystal Palace—purchased, by the Queen, for a thousand guineas, and presented to the Emperor of Austria.

Splendid
dessert set.

Encaustic
tiles.

The encaustic tiles, of which so many beautiful specimens may here be seen, are peculiarly the productions of this house. They are designed for ornamental floors, in churches and other buildings. The designs are painted, with mineral colours, upon the moulded but yet unbaked clay, and the tiles are then burnt to the hardness of stone. The china or enamel tablets, for displaying the names of streets and the numbers of houses, which are here exhibited, are the best devices of the kind within our knowledge.

Street and
door tablets.

Carpets.

The girders of this gallery are hung with various specimens of fine carpeting and drugget, presenting good examples of the English tapestries.

Ornamental
fountain.

In a large collection of beautiful china, exhibited by RIDGEWAY, we note a large and highly ornamental fountain ; and a little further on, a neat toilet-basin upon a pedestal—all of veined stone china.

Rose & Co.'s
china ware.

Two of the long tables, which now stretch before us to the south balcony, are covered profusely with the china of ROSE & Co. We notice here an extensive variety of pure white, and of decorated pitchers and vases.

South
balcony.

The view from the south balcony of the Palace, is not of a nature to detain us from our observations within. Our path now lies between the tables of ROSE & Co., whose beautiful supper services, at the north end of the table, are worthy of our notice.

Supper
services.

The next table is covered chiefly with exquisite

works in Parian clay—the contribution of Alderman COPELAND of London, to whose taste and enterprise the introduction of this admirable material for artistic pottery into general use is due.

Mr. COPELAND has added a new power to art, and a new delight to its admirers, by his exquisite productions in this line. The colour of the Parian clay is beautifully adapted to statuary, and its softness of tone surpasses that of the finest marble. In Mr. COPELAND's collection, around which we must pass with only too much rapidity, are numerous groups of figures which challenge our admiration. They are both copies of famous subjects, and originals from the designs of FOLEY. The "Ino and Bacchus," is one of the finest of the classical groups. The "Sabrina" of MARSHALL; the royal children in the characters of the Four Seasons; Paul and Virginia, and the Prodigal Son, are widely differing, but all beautiful works. So very exquisite is this material for statuettes, that we are loath to see it used for less artistic objects. The Parian bust of Webster, at the north end of Mr. COPELAND's tables, will not escape the notice of all admirers of that great statesman—and who are they not? We may properly add here a few words as to the mode of producing these beautiful figures. They are not modelled by hand, as most people suppose; but the clay, in a fluid state, is cast into plaster-of-Paris moulds. These absorb the water from the Parian, and the clay shrinks greatly in drying; so that when it comes out of the mould, it is one-fourth less in size than the mould itself. This is a source of great difficulty in the manufacture of Parian; and when this is controlled, the burning, or "firing," as it is called, exposes the figure to further risks of injury or ruin—escaping which, it is certainly one of the most pleasing forms of art.

Parian ware
of Alderman
Copeland.

Parian clay

Fine groups.

Copies and
originals.

Ino and
Bacchus.

Sabrina.

Royal
children.

Prodigal Son.

Bust of
Webster.

Method of
making
Parian
works.

Cast in
moulds.

Difficulties.

GALLERY C.

GERMANY AND FRANCE.

GERMANY.

Amazon in
silver.

Jewellery.

Flower of
brilliants and
rubies.

Brushes.

Immense
variety of
articles.

Surgical
instruments.

At the very point where we finished our review of the British Gallery, we commence that of the German Gallery; and the first object that presents itself to our notice is a model, in silver, of the admirable group of the Amazon. The popularity of this great work is well attested by the variety of its reproductions,—of which there are, at least, three other examples in the Exhibition. Several cases of fine jewellery are grouped before us, affording good exemplifications of the artistic forms which personal ornaments have now assumed. The most observed, perhaps, of all the works of the jewellers of the Zollverein, is the jewel-flower, exhibited by HAULECK. It is a carnation—the stem and leaves of gold and enamel, and the flower of brilliants and rubies.

Leaving these objects on our left, we may notice a large display of fine brushes before us; and then, turning back, we pass along the most eastern line of the German Gallery. The immense variety of the German contributions renders it a difficult matter to point out enough of them to keep the visitor free from bewilderment. To mention them all, or even the half of them, would be impossible—unless we had volumes, when we have only pages, at our command.

A formidable collection of surgical instruments, from WÜNSCHE of Liepsic, stares us full in the face

at the beginning of the line, and we stop to wonder that such brilliant and fanciful contrivances are associated with ideas and realities from which the bravest shrink appalled. A case of agate and glass marbles, and all manner of birds' eyes, for taxidermists, is in striking contrast to the lancets and tourniquets just named. If we lift our eyes above the table, we find there a long panorama of zephyr worsteds, fancifully arranged in graduated tints, of which there are said to be, in all, fifteen hundred. We presume no one would hesitate to pronounce these the contribution of Berlin.

The porcelain ware of the Royal Prussian Factory now claims our notice, and we could not reasonably withhold our admiration from its beautiful examples of industry, directed and embellished by a high style of art. The vases of this collection are superbly decorated, and the paintings on panels are probably not surpassed by any similar works in the Palace.

We notice, next, a pair of candlesticks, in polished agate, followed by a collection of groups and statuettes, in white china. A picture, painted on porcelain, representing "Columbus in sight of land," is a very attractive specimen of that class of art objects. Bohemian cut garnets, polished agate ornaments, bronzes, and lace of gold and silver thread, present themselves in succession to our notice. Continuing our progress, we presently reach the large collection of pencils and coloured crayons of FABER, with examples of the work they will do—in the hands of a skilful artist!

Passing around this collection, we find gold leaf and bronze colours; further specimens of gold and silver thread fabrics, and brushes of many kinds. Fine wires of steel and brass, are here met with, from two or three contributors. Metallic ornaments for books and fancy boxes, together with crucifixes

Strange association.

Agate and glass.

Zephyr wools.

Porcelain.

Superb vases.

Agate candlesticks.

White china.

Porcelain picture.

Cut garnets.

Agates.

Gold and silver thread.

Pencils and crayons.

Gold leaf and threads.

Brushes.

Ornaments.

of metal, are displayed by ERHARD ; and beyond these, the products of the gold-beater are set forth in glittering profusion.

Gold leaf.

Clocks.

The German clocks, of which several examples here present themselves, would probably be judged unfairly by their outward show. The manufacture of cheap clocks is extensively carried on in Nuremberg. Proceeding forward, we find scales, mortars, optical instruments, tellurians, an air-gun, apparatus for the chemist, pharmacist and philosopher. Of these we may notice especially the relief globes of REIMER, for the use of the blind, and the numerous philosophical instruments of LUHMÉ.

Scales, &c.

Air-gun.

Relief globes.

Apparatus.

Straw work.

Straw work and basket-ware in great variety ; artificial flowers ; numerous specimens of the beautiful carvings in ivory, and horn, and wood, for which the Germans are famous, line the tables before us upon our left hand, to the southern extremity of the passage. Here we notice a rug of mosaic furs, of which we remarked so beautiful a specimen in the Canada courts ; and looking upward, we find displayed many specimens of engraved and coloured glass. The latter is from the extensive works of Count SOLM, at Baruth, and is remarkable for the purity and brilliance of its hues. Many pleasing examples are here seen of the transparent porcelain shades so familiar to us in smaller specimens. These pictures are produced by impressing sheets of fine transparent clay with a sharp die. The proper effect is obtained by holding them against a strong light, either artificial or natural, the thin parts producing the lights, and the thick parts the shadows of the picture ; and the whole bearing a striking resemblance to mezzotint engravings.

Carvings in ivory, &c.

Mosaic furs.

Coloured glass.

Porcelain shades.

How made.

Great variety.

Pursuing hence the long line which stretches beneath the glass wall of the building, we encounter a multitude of objects, varying in character from

paintings on porcelain to pewter toys. Of the former, there are some to reward our close inspection. We notice here a large collection of copies of the pictures in the Dresden Gallery, painted on ovals and oblongs for breast-pins or tablets. Some exquisite carvings by HANKE, should not be overlooked. Flower-pots and vases in terra cotta, afford very good specimens of the application of this material to fine pottery.

Extremes.

Porcelain
paintings.

Carvings.

Terra cotta.

The toys of Germany, and almost exclusively of the Bavarian town of Nuremberg, on the Kanitz, constitute a very large portion of the objects in this gallery. They appear in every shape, and in a great variety of materials. Toys of pewter, toys of iron, toys of wood, toys of glass, toys of papier maché, abound. Their name is legion, and the whole section seems to be one vast toy shop. For a considerable space before us, the room not occupied by toys is filled with samples of cologne, nearly all bearing the familiar name of JOHANN MARIA FARINA. There are *seven* different contributors of cologne water under this talismanic name, and they are distinguished from one another by the street in which they live. Thus we have J. Maria Farina, of Juleck's Platz; and J. Maria Farina, of George Platz; and again, J. Maria Farina *opposite* Juleck's Platz, and J. Maria Farina *opposite* George Platz. Among so many claimants to the honour of being "the original John," it would be, perhaps, difficult to decide which is entitled to it. Passing beyond the region of the toys, and the odour of the colognes, we reach the leather manufactures of the Zollverein, and dressed calfskins, harness, and boots and shoes, present themselves to notice.

Toys.

Eau de
Cologne.The rival
Colognes!

Leathers.

We spoke unadvisedly just now of passing beyond the region of toys; for even here, before us, is the greatest of all the toys in the Crystal Palace—

The prince
of toys!

Gulliver in
Lilliput.

Gulliver among the Lilliputians! This amusing work is made in papier maché, by FLEISCHMANN, whose toys at the south end of the gallery we omitted to mention as the best of the whole collection. The nonchalance of Gulliver, as his excited captors bind him with their frail cords, or assail him with their needle lances, is well represented, and the work affords a vast amount of amusement to the girls and boys, and to "children of a larger growth."

Fun for the
children.

We shall now retrace our steps to the south end, and notice the objects arranged upon the left side of the passage. Silks, ribbons and velvets are followed by books, cards, papers, vellum; ornamented papers; fancy boxes, and illustrated works on art and architecture. This rapid generalization—more than which is not required—brings us to the end of the line, and we pass around into an interior passage, to inspect a display of paintings on copper, tin, canvass, and other material, manufactured, like Peter Pindar's razors, "to sell." They show bright colours, and are not without incidental merit. The snuff-boxes, which are displayed here and elsewhere, form a prominent item in the small manufactures for export of the German artisans. They belong to Nuremberg, as do these little implements which hang beyond them—hooks and eyes.

Hooks and
eyes.

That skull, and those odd-shaped bones, are made of papier maché, and are designed as models for anatomical or physiological study. The principal textile fabrics of the German States are exhibited in the lower courts, but many of the lighter class, and particularly all the wrought or embroidered fabrics, are to be found in the gallery. Among these we now find ourselves. A large assortment of woollen hosiery is followed by a variety of articles made of the pine-needle wool, which we noticed be-

Skull in
papier maché.

Light textiles.

Hosiery.

low. Beyond these are felt shoes and slippers, which may *be*, for aught we know, as comfortable as they *seem* awkward. Felt shoes.

The opposite side of the passage is occupied chiefly by embroideries, laces, and furniture stuffs. The line opens with velvet and ribbons in considerable variety from Crefeld. Some good examples of raised work in Berlin wools are found a little in advance of these ; and those who are on the *qui vive* for novelties, may observe an embroidered chandelier ! Laces, &c.
Velvets.
Berlin wool work.

Towards the end of the passage, the textile fabrics give place to combs and brushes and looking-glasses and horn spoons. Combs and brushes.

There remains yet one passage of this gallery to be traversed, and it opens to us with a large display of scissors, table cutlery, and razors. Muslin curtain fabrics drape the walls, to give place presently to laces, blonds, gimps, and all descriptions of trimmings by several exhibitors. Parasols of gay colours in silks, are followed by laces and embroideries from POHL of Saxony, and these, by tambour and other embroideries from STECHER of Baden. Cutlery.
Curtains.
Trimmings.
Parasols.
Embroideries.

There stands apart from other objects, and not far from before us, a group of theodolites. They are excellent instruments, made by BREITHAUPT, of Hesse Cassel, and with them we bring our observations on the German Gallery to a close. Theodolites.

A few steps are sufficient to effect our transition from Germany into France in the topography of the Crystal Palace. We pass around the stairs, and we stand upon the floor of "la belle France." Just before us is a handsome show-case filled with whips and canes, richly mounted with gold and silver and ivory and pearl. Another case, filled with a large assortment of gloves, reminds us, if indeed we had forgotten it, that France supplies the whole fashion- FRANCE.
Whips and canes.
Gloves.

[France.] able world with the daintiest specimens of these articles, of which we shall find numerous contributions in this gallery.

Surgical
instruments.

The surgical instruments of LÜER, are, with perhaps a single exception, the most numerous in variety, and the best in the Exhibition. It is difficult to imagine to what special use in surgery every one of so vast a collection of instruments can be applied. Passing behind the cases of Lüer, we may inspect

Works of art.

some very beautiful objects of art—alto relievos, in what resembles the finest ivory, and also in silver.

Aubusson
carpet.

At this point we have a fine view of a magnificent Aubusson carpet, contributed by SALLANDROUSE, the head of the renowned Aubusson manufactory. It is of very large dimensions, probably thirty feet square, and covered with a single design, somewhat fancifully styled “The Virgin Forest.” The colours are very brilliant, and it is unnecessary to say that the work is in the highest degree admirable. It may surprise some to be told that this carpet is valued at

Its value.

\$4,500 !

Passing in front of the stairs, we turn again towards Germany, to take note of the French contributions in a court upon our left hand. They consist chiefly of perfumery and fancy articles,—but among them we shall find bottles for generating carbonated waters, and a new system of coffee-pots.

Perfumes.

Coffee-pots.

Masks.

A case of masks displays many varieties, and some of them highly ornamental, for masquerades. As we pass from a hasty inspection of brushes, perfumery, and *medicines*, we find some elegant fans, very elaborately worked shirts, and fine kid gloves.

Strange
mixture.

Leather.

The plan we have marked out for our progress through this gallery, conducts us now to the passage on the south border, and along the line of the windows. The entire wall-space is occupied by leathers, and the preëminence of the French manufacturers,

in this line is abundantly illustrated. There is very little, of special interest, upon the tables. Shell and fancy snuff-boxes, alternate with patent water-proof shoes—and these again with needles, and contrivances to aid in threading them ! Artificial flowers and leaves stand side by side with sabots—wooden shoes, used extensively by the peasantry of the French provinces. Lest we should weary of monotony, these are followed by the watch-glasses of BERGUN & Co., who manufacture the large number of 90,000 per diem. The bright-coloured leathers of DEADDE, and of GAUTHIER, attract our notice by their contrast with the black leathers which stretch along, upon both sides of them.

Snuff-boxes.

Patent shoes.

Needles.

Sabots.

Watch
glasses.Varnished
leathers.

A variety of architectural ornaments, made in stone-mastic, and designed for interior or exterior decoration, are contributed by HEILIGENTHAL of Strasbourg. They are both handsome and durable, and are made by pressing the mastic into moulds, with heavy weights, to expel the moisture it contains. Various descriptions of vessels, made in stone china, or *porcelain dure*, are found here. Returning, upon the other side of the passage, we notice an extensive and elegant display of decorated porcelain, from HOCHÉ & PEPIN-LEHALLEUR of Vierzon. The French department presents so many and such brilliant specimens of ornamented porcelain, that the vocabulary of descriptive words is in danger of being exhausted. A vast amount of time, and labour, and taste, and artistic skill, is employed in this elegant department of decorative art. With the unrivalled productions of the Sevres manufactories in the first rank, the porcelains of France may well challenge those of all other countries to match them.

Stone-mastic
ornaments.

Stone china.

Porcelain.

Articles of wearing apparel next meet our observation ; and, although the felt hats are of fine quality,—the straw bonnets of graceful shapes,—and

Wearing
apparel.

Wearing
apparel.

the beavers, for children, tastefully trimmed,—we find ourselves pressing hastily on in search of something more attractive. Neither the wooden shoes—or “galoshes”—which follow, nor the fine patent leather boots, and embroidered slippers, will suffice. It is scarcely in that extensive collection of embroideries on muslin, contributed by Mme. CHANCEREL of Paris, which we now pass around into another passage. Silk buttons are serviceable in their place,—and gloves we must, at times, at least, regard with favour ; but these, in a succession of five or six contributions, fail to arrest our steps. On, and still on, by a large display of white china, (we linger a moment to inspect the bisque figures connected with it,) and arrive at the extremity of the passage, where we find some pleasing examples of porcelain painting, by Mme. LAURENT, on a concave panel, two vases, and a set of plates. Re-ascending the passage, we pass another collection of decorated china—and immediately beyond it, reach that of HAVILAND of Limoges—which is, unquestionably, the finest in the gallery. Its splendid vases, with elaborate and effective paintings, and its magnificent dinner-service of white and shaded crimson—conspicuous among many objects which might well be called elegant—compel us to pay this collection the tribute of a pause.

French
hosiery.

The French haberdashers and hosierers are famous, the world over, for their fabrics, and they do themselves credit in our Exhibition in numerous instances. We notice, in one case, theatrical “*bonnetrice*,” and “hosiery for disguise.” At the extremity of the line, we find a rich display of blond, scarfs, mantillas, and rich laces ; and, passing around the case, we observe that it is followed by still other specimens, in the same department. A brief advance brings us to a display of window upholstery, by GRIUNTGENS.

Blonds and
laces.

of Paris, a beautiful variety of cornices, ornaments, tassels, &c., with all manner of silk and chenille trimmings. The furniture embroideries of BARBAT, are rich and well displayed. Something novel may be noticed here—it is an ornamental stool, which serves also as a parlour dog-kennel ! In the interior of it is a stuffed terrier, of the tiny variety.

Upholstery.

A novel dog kennel.

We pass, again, the porcelain of HAVILAND ; and that of PETTEVUYT, stretching laterally before us. Going up the passage, we notice a variety of accordions ; and, beyond them, the *balance pendule*, of BERANGER of Paris. This is a novel style of counter scales, combining convenience and accuracy.

Porcelain.

Novel scales.

Some showy examples of metallic embossing and chasing, next attract our notice ; and beyond these, brilliant designs for shawls, by HARTWECK, and a collection of designs for manufacturers of dress goods, by QUERU. These are interesting examples of the skill, and taste, and expense, required to get up an original pattern for a woven shawl, or a printed cashmere dress.

Embossing in metal.

Shawl and dress patterns.

A showy stand is now before us, containing gilt crucifixes, candlesticks, &c., for Catholic churches, with a large variety of ornamental bronze clocks, vases, and figures. Before passing around this stand, we must not omit to notice a silvered bronze ewer, after the design of Benvenuto Cellini. The bronzes of WEYGAND, are upon the opposite side of those of VILLEMSSENS, just noticed. They are beautiful examples of castings, from artistic designs. We notice here, a bold and effective bronze relief, by ETREX, representing the Shipwreck of Medusa. A case of imitation pearls, affords an illustration of the nice and delicate manipulations of French artisans. These ornaments are made, by projecting into the interior of very thin spheres of opalescent glass, a solution of fish scales, in ammoniated water—which, when

Crucifixes and altar furniture.

Bronzes.

Fine work in relief.

Imitation pearls.

Teaching the blind. dry, coats the inner surface with a pearly lustre.

Jewellery. An ingenious pantograph, by DAVARD, is followed by the embossed printing, music, and maps, for the use of the blind, upon the system of LAAS D' AGUEN ; and these, by a choice collection of jewellery, manufactured by RUDOLPHI of Paris, among which are beautiful imitations of grape clusters. A large collection of main-springs, for watches and musical boxes, illustrates the high degree of value which labour imparts to iron.

Philosophical apparatus. The beautiful philosophical apparatus of France, is now exemplified by several exhibitors. No country in the world surpasses France in appliances for the illustration of the Physical Sciences, and the Optics. and the optical instruments of LE BRUN, NACHET, MIRAND, and VEDY, are all notable for their superior workmanship. Physics. A case of philosophical apparatus, by DUBOSCQ-SOLEIL, will attract and reward the attention of the scientific visitor, by the variety and beauty alike of its contents.

Surgery. A splendid display of surgical instruments is here made, by CHARRIERE of Paris. Every conceivable variety of instrument and appliance, from a lancet to a complete set of artificial limbs, would seem to be gathered into this remarkable collection.

White metal. The white (inoxidable) metal boxes of CHAPISEAU, closely resemble silver, at a very small part of the cost of the latter metal.

Glassware of Clichy. We turn now, to inspect the numerous and very beautiful specimens of manufactures from the glass works of MAES, at Clichy. The assortment embraces every known variety of glass-ware, and the examples of decorated glass are particularly attractive. Here are vases, resembling the finest painted porcelain, paper-weights of crystal, with medallion ornaments, portraits, and bas-reliefs in silver ; door-knobs, and finger plates, and daguerreotype glasses, are em.

braced in this large collection. Bronzes, silver-ware, Bronzes.
 boxes, and cellarets of rosewood, fill up the rest of Cellarets.
 the table, and passing around it, we find, upon the
 opposite side, a large variety of necessaries, and fur-
 nished cellarets, of ornamental woods. The space
 upon our left hand, after passing a bronze bust of Bronzes.
 Napoleon III. and a fine candelabra in bronze, as
 we proceed eastward, is occupied chiefly by the
 busts of CORDIER, remarkable for the oddity of
 their subjects. We encounter Chinese, Africans,
 and Asiatics, with their characteristic physiogno- Old busts.
 mies very strongly marked, in the bronzed and
 gilded metal of which they are composed. - A very
 large and massive vase of silver, in a case by itself, Massive vase
of silver.
 and a large display of silver-plate, in a case to the
 left of it, are the contributions of ODIER of Paris ;
 and just to the westward, we find the showy electro- Electro-
plated ware.
 plated ware of CHRISTOFLE. Large vases and baskets,
 full of beautiful artificial flowers, bespeak their Paris-
 ian origin, and take the fancy of the multitude.

Passing a specimen of the banana plant, we com- Banana.
 plete our observations on the French department,
 and emerge from the building, upon the west bal- West balcony.
 cony, commanding, when the weather is fine, a most
 charming view of the noble Hudson, and its line of
 palisade rocks.

GALLERIES D AND A.

SWITZERLAND, AUSTRIA, ITALY, AND THE UNITED STATES.

Union of two
galleries.

WE have united the Galleries, over Divisions D and A, in this chapter, because there is no natural division between them; the United States occupying a part of the former, and all of the latter. The gallery, strictly over Division D, begins precisely where our review of the French contributions ends;

SWITZERLAND.

the transition, therefore, is an easy one—from France into Switzerland.

Nature of
objects.

The industry of Switzerland is chiefly exhibited to us in its ornamental features, such as, fine watches, mathematical instruments, embroidered muslins, silk and straw fabrics, and carved wood.

Watches.

The first objects which present themselves to us, as we re-enter the building, and repass the silverware of ODIER, is a small case of exquisite watches and jewellery, from CAPT of Geneva. A porte-monnaie, or pocket-book, containing a small watch, with half-a-dozen separate dials, and a beautiful casket, disclosing a tiny bird, which, at the touch of a spring, ruffles its plumage, and sings “like a nightingale,” are the specialties of this case. We shall see, hereafter, many specimens of Swiss watches and fine jewellery, and we may take this occasion to remark that, of the twenty-two Swiss cantons, only four or five of them manufacture watches. Geneva, Neuchatel, Vaud, and the Bernese Jura, monopolize this branch of industrial art, and Geneva is, of

Bijouterie.

Singing bird.

Watch
making
cantons.

Geneva.

all these, the most famed for its productions in this line. It is estimated that the number of watches made annually in these cantons, is not less than 1,200,000, more than half of the whole number manufactured annually in the known world.

Extent of manufacture.

We notice next another famous branch of Swiss manufactures, in embroidered robes and muslins from St. Gall. Switzerland produces more of these excellent cotton fabrics than any other country; and they are largely represented in the Exhibition.

Swiss muslins.

We turn now to the watches of BREITLING and

Watches.

the fine jewellery of DUTERTRE, which introduce us to a succession of similar objects; and among them several examples of the Swiss mathematical instruments, which, although highly finished, are yet sold at a lower price than any others in the world.

Mathematics.

Passing now through an open doorway, we enter an open court, hung around, in part, with the printed cotton fabrics of the Swiss cantons St. Gall and

Printed cotton goods.

Zurich. They display great brilliance of colour and beauty of pattern. Here also we notice the beautiful Swiss muslin curtains, embroidered with historical and fancy subjects. Upon one of them, in the south-west corner, we observe the tomb of Washington.

Lace curtains.

The centre of this court is occupied by the harpsichord piano-fortes of HÜNI & HUBERT of Zurich; while beyond them, on the side tables, are leathers, fine terra cotta ware, and geometrical models. Switzerland is famous for its object-glasses for telescopes, of which we find here some superior specimens.

Pianofortes.

Leathers.

Terra cotta.

Object glasses.

We turn aside for a moment from Swiss industry, to direct the visitor's attention—while in this court—to the engraved glass in the north-west window of the building, as a very beautiful example of a new and ornamental process, introduced by COOPER

Engraved glass windows.

and BELCHER of New Jersey. A muff and tippet of the beautiful skin of the greb—a rare water-fowl—will attract the notice of the ladies ; and just beyond it, we find specimens of raw and manufactured silks. A case of the former, exhibited by FOGLIARDI, and obtained by a new process, is of unrivalled strength, fineness and beauty. The fine lace fabrics and embroideries of STAHELI WILD, terminate the Swiss department on the line we are pursuing ; and in order to preserve unity in our observations, we turn here to the opposite tables, and find further examples of silks and muslins.

Turning a corner, into another passage, we admire the lace fabrics and fine Swiss muslins of GERSTLE ; at the end of which display, we turn to those of BOURRY & D'IVERNOIS, on the opposite wall, and notice especially a rich curtain embroidered with a scene from the story of Paul and Virginia. Beneath these are wood-carvings of exquisite beauty and great variety. Tables in carved and in painted wood ; boxes, baskets, knives, spoons, groups of animals and Swiss cottages, attest the ingenuity and taste of the industrious artisans who produce them. The Swiss carvings are said to be wrought principally, during the summer, in the Bernese Alps, and brought in the winter to the lower cantons to be sold.

Turning the corner once more, we still face the fine lace fabrics and muslins of St. Gall, and notice different styles of embroidery canvass. The piece muslins of REUTER, with needle-work points, are beautiful fabrics. Opposite to these we find great varieties of the straw braids and straw laces, pure and mixed with hair, in the manufacture of which forty thousand persons are constantly employed, chiefly in the cantons of Argovie and Lucerne. The collection of ISLER & OTTO in the first-named

Greb skin
muff.

Raw silks.

Lace goods.

More lace and
muslins.Wood
carvings.

Muslins.

Canvass.

Straw goods.

Extent of
manufacture.

canton, and that of HURTER & Co. in the latter, Swiss goods.
are good examples of the variety and beauty of
these fabrics, now so extensively used in the manu-
facture of fine bonnets and hats.

Beautiful watches, chronometers, and mathemati- Watches and
instruments.
cal instruments extend from the end of this passage
to the very point at which we commenced our
review of Switzerland. In the magnificent display
of watches by PHILLIPPE, PATEK & Co., of Geneva,
is the smallest of all small watches. It will escape Lilliputian
watch.
notice unless we look closely ; for the outside
diameter of its case does not exceed one-third of
an inch !

Here we terminate our interesting tour in Switzer- End of
Switzerland.
land, regretting that time is wanting to allow of
more minute observation of its numerous beautiful
works.

Besides the various courts occupied by Austria in AUSTRIA.
Division D, upon the floor of the Palace, there is
considerable space appropriated to that country in
this gallery ; and we find her manufactures separated
from those of Switzerland by only an imaginary
line.

Continuing our advance, we find Austrian leathers, Leathers and
furs.
furs, horse-hair cloths, and wood-tresses. The latter
are braids of fine shreds of white wood, closely Wood-tresses.
resembling straw, except in colour, and similarly
used for hats. Hitherto we have kept each country
to itself in our observations ; but now we are com-
pelled (unless we overleap the broad tables upon
our left hand) to take Austria and Italy alternately,
for they occupy the same tables with no cross pas-
sage between them. An unfortunate juxtaposition
truly ! but one which we cannot avoid. Forward
then a step, and Italy reveals to us various mosaics Italy.
in wood ; crucifixes and other ivory carvings ; a Carvings.
carved bracket and carved flowers, in wood ; table

Japanned
table tops.

Embossed
work of art.

Crucifix.

Austrian
textile fabrics.

Raw silk.

Italian
sculptures.

Austrian
merinoes.

Hungarian
dresses.

Mosaic table
cloths.

Straw hats.

Oil prints.

Musical
instruments.

Phonikon.

tops, painted *a la Chinois*; marble busts and bronzes. Continuing around the table, we find a singular work in metal, representing the Descent from the Cross, in alto-relievo, with designs in bas-relief around the border. An ivory crucifix and "the Pope's prayer book"—but why so called, we cannot imagine—are also found here.

The scene changes again to Austria, and shawls, vestings, horse-rugs, bareges, muslin de laines, and a large assortment of linens, occupy the tables. The opposite side to which we now turn, displays a beautiful and extensive variety of shawls, silks, and silk and woollen fabrics. We must not overlook the fine specimens of raw silk for which Austria has a deservedly high reputation.

Italy, in her turn, shows us a few unimportant objects until we turn into another passage, and find her tablets of marble richly sculptured with flowers in alto-relievo, and a marble bas-relief of the Virgin. Once more into Austria, to glance at her bright coloured merinoes and satin-muslins, which overhang a curious collection of characteristic dresses of Hungary. Here is the sheep-skin *bunda* of formidable weight, and gay with multitudinous braids. Then comes the *szur*, the Hungarian national dress, and this is followed by Hungarian shooting jackets, and some other garments. Two *mosaic* table-covers of fine cloth are quite unique objects, and Venice straw hats complete the line.

We turn to examine the oil prints of HARTINGEN, specimens of great beauty, and having all the effect of fine *paintings*.

Musical instruments in variety here represent the excellence of this department of Austrian manufactures. The brass instruments are particularly numerous, and include a new horn, called the Phonikon, and a new guitar. An immense display of

meerschaum pipes, and pipe heads, leaves us no room to doubt that our Austrian cousins are devoted to the weed. Some curious mechanical toys, and a variety of spun and woven glass ornaments may be remarked here.

Austrian pipes.

Curious toys.

Spun glass.

The next section of Italy affords us many objects, but few of them are important. We notice some beautiful straw braids and fine bonnets from Florence, and a singular picture *cut out of paper*, representing King Victor Emanuel taking the oath to the Constitution.

Italian straw work.

Paper picture.

Now, we notice Austrian photographs on paper; combs and buttons, artificial flowers, leaves and sprigs, and more examples of the beautiful oil prints of HARTINGEN. Opposite to these brilliant mineral colours, geometrical figures in wood and crystal, and chemical apparatus of glass, occupy the tables.

Austrian photographs.

Oil prints.

Geometrical figures.

Passing into Italy for the last time, we notice raw silk, various chemical productions, and a large display of fine Genoa pastes, or vermicelli, the bread of Italy.

Italian silk.

Genoa pastes.

In a little while hence, we shall see a case of superb velvets which belong to Italy, but have strayed into the United States section. We mention them here to preserve unity, and with them our Italian and Austrian observations come to an end.

Stray velvets.

The rest of the gallery space is occupied by home contributors, though we shall occasionally find instances in which the goods displayed belong properly to foreign countries, such as silks and velvet, and furs, *made up* only by our manufacturers and dealers.

UNITED STATES.

We enter first a court in which a New York dealer exhibits Chinese and other eastern articles, most of them the characteristic products of Chinese industry. Here are crape shawls, carved ivory boxes, fabrics of the pine-apple fibre, and quaint

Chinese productions.

Mosaic chess board.

Ivory statue of Christ.

old porcelain vases. A chess-board wonderfully inlaid with millions of minute particles of ivory and wood may be found here. Most attractive of all the objects, however, is a beautiful ivory statue of Christ, carved by a Genoese monk, who, the story goes, executed the work from inspiration, not being before a sculptor.

Aztec art.

A small collection of Mexican curiosities is exhibited in this section. They consist chiefly of clay images—relics, unquestionably of the Aztecs, and singular illustrations of the plastic arts of that long buried race.

Mantillas.

Chain of quilts.

Leather brackets.

Leather by a new process.

Manufactures of leather.

Harness.

The passages which we are now to follow, traverse the north gallery longitudinally. Taking the one upon the left, or west side, and passing a case of rich mantillas, designed and manufactured by BULPIN, we find ourselves between leather on the one hand, and all descriptions of quilts, counterpanes, and table-covers upon the other. Looking up, we discover carpets and quilts depending from the girders. A quilt, containing 10,000 pieces of silk, or 25,000 pieces of velvet, may be a *great* work to the fabricant, but it must not detain us in our progress through the Palace. We notice, as we pass on, a novel application of leather to the production of ornamental brackets and picture-frames. These are made of pressed leather, which, when varnished, has a very handsome appearance.

Specimens of leather, tanned without bark, are exhibited by the patentee of the process. The extremity of the line presents to our notice the manufactures of leather, in various beautiful examples. Military equestrian equipments, from St. Louis, and three or four extensive displays of harness, afford convincing proof that our artisans are not to be excelled in these fabrics. In a corner of this section are some stray collections of daguerreotypes, and

solographs—as one exhibitor terms pictures taken upon paper instead of metal plates. Solographs.

Passing an extensive display of fine harness, made by McFARLAND, and a case of superior enamelled leathers by CHADWICK—both of Newark—we come into the midst of hair work. Wigs, toupees, and textambs, stare us in the face ; and, if we happen to be bald, seem to twit us with our misfortune ! More harness.
Wigs and toupees.

The surgical department of the Exhibition is extensive ; but few, we apprehend, will regard it as being attractive. The appliances of this art are too immediately suggestive of physical horror, to be made fascinating, however tricked out in silk and tinsel. We pity, from our hearts, the poor creatures—though they *be* only wax figures—who stand up in glass cases, bandaged in every possible way, and for every conceivable distortion and fracture—*except a broken neck!* We cannot help confessing that the artificial legs of PALMER and DRAKE are very neat ones—that the artificial eyes of GRAY *look* very well—that the artificial jaw of CHAPMAN seems to operate very like a real one—but we instinctively shrink from all these things. Even the artificial teeth, which we see upon every hand, seem to have a grating sound to our imagination. Surgery.

Objects of pity.

Artificial limbs, &c.

The wall space, through all this gallery, is hung with multitudinous specimens of worsted work and other embroideries. There are many scores of these, and among them occasional works of real excellence. A picture, entitled “Raphael sketching in the Vatican,” is one example in point. We may notice a case of silk fabrics—ribbons, &c.,—from Boston. These are yet rare products of American industry. We find, beyond these, displays of costly silks and mantillas, made up of foreign materials, and therefore of little interest as exponents of our national industry. Embroidery.

Silk fabrics.

A victim. Cast a glance of compassion at that poor victim of surgical art, who is "bound hand and foot" in PHELPS' case.

The next passage we traverse conducts us northward ; and we pass, on our left hand, beautiful specimens of home-made Honiton point lace ; a branch of manufactures successfully undertaken in this city by ROBERTS & Co. Then come coach laces, oil cloths for tables, embroideries in Berlin wools, more quilts, and still more surgical instruments, until we reach the end of the line, where cases of silver-ware and jewellery bar our further progress northward.

The opposite side of the passage we have just traversed, presents to our notice, as we return, numerous contributions of gold leaf and gold foil, principally designed for the dentist's use. Here we find some fine specimens of bronze castings ; a department of manufactures in which we have as yet made no great progress upon this side of the Atlantic. These are exhibited by GILBERT. Gold pens, gold leaf, and gold locket, are followed by very excellent lunette watch crystals ; and these by several examples of ornamental jewellery, and of work in hair and gold, displaying much good taste and artistic skill. The gold pen manufactures of this country are almost incredibly extensive, and have several exponents in the Exhibition. BAGLEY'S pens, which are highly esteemed, are here displayed, and just beyond them a showy service of solid California gold. It is a tea service, and consists of twenty-nine pieces, arranged upon a chaste and beautiful plateau of silver. This work is the contribution of BALL, BLACK & Co. It is valued at \$15,000—a very large sum to be invested in gold cups and saucers ; which, although exhibiting a neat design—an embossed vine wreath—are all exact duplicates of each

other. The great defect of many of the costly works of the gold and silver-smiths represented in the Exhibition, is an almost total lack of *artistic* beauty. Vessels of gold and silver, as well as of porcelain, should exhibit variety and purity of design, or their very richness of material becomes distasteful.

Lack of art
in gold and
silver ware.

We pass on to inspect the plate of TIFFANY & Co. It embraces two extensive chests of silver ; the "Collins service" of fine gold ; a chaste silver toilet set ; and in the farther corner, a variety of magnificent ornaments in diamonds and in pearls.

Plate and
ornaments.

MARCHAND & Co. make a brilliant display, just beyond, of superb ornaments, chiefly of diamonds. The beauty and variety of American jewellery at the Exhibition, justly excite the admiration of all. It is one of many proofs to be found within the Crystal Palace, that it is not in the utilitarian arts alone that we are beginning to rival the productions of the Old World.

Diamonds.

American
jewellery.

Upon the staircase descending from this point, we may observe an elegant Aubusson carpet ; and, finally, in this section, our notice is attracted to a magnificent display of manufactured and unmanufactured furs, exhibited by LASAK. A huge polar bear plays sentinel in the midst of this collection.

Aubusson
carpet.

Fine furs.

Polar bear.

We turn now, and retrace our steps till we reach a small case near the edge of the gallery, in which are displayed various curiosities of art and labour, among which is a veiled Cupid in miniature, wrought in fine marble, the veil closely resembling natural lace. Numerous antique rings, with historical *links* to the remote past, are also embraced in the collection ; and the case is surmounted by a model of the famous Gothic cathedral at Rheims. These objects belong to Mr. Moon, of the Studio Curioso.

Curiosities.

Veiled Cupid.

Quaint rings.

Cathedral of
Rheims.

A set of chess figures in solid gold and silver are

found here, as neat examples of the goldsmith's art. Silver and silver-plated ware, from various manufacturers, occupy the whole extent of the passage, terminating with the case of JONES, BALL & Co. of Boston, whose works are remarkable for their chaste style, and for their substantial workmanship. They include the vase presented to Daniel Webster by the citizens of Boston, and the plate which Mr. Webster ordered to be prepared for Peter Harvey, inscribed with the very words of the direction itself. BAILEY & Co., of Philadelphia, represent most creditably the silversmith's art in that city of acknowledged taste. Their ornamental shell castor is a novel and pleasing device.

A line of tables, stretching off to the north, now invite our notice, and we turn to them to observe the handsome umbrellas of SMITH ; fishing-tackle, in great variety, are displayed along the wall, almost every description of fancy handiwork, in wax, hair, shell, worsteds, pearls, and glass. Of these, a very large number are the work of a single contributor—Mrs. REED.

Passing around the end of this line, we arrive in the midst of a gay and sparkling court, where the taxidermist, the confectioner, and the toy-maker, have vied with each other, to make the most imposing display. Going down the narrow passage which first opens to us, we find, on the right hand, bird-cages, confections, toys, and shell-work, and upon the other, BELL's beautiful specimens of preserved birds and animals. On the right hand again, fans, and feathers, and flowers ; and upon the other, stuffed animals, by HURST, and a collection of many varieties of owls, by BODE ; the latter, recalling irresistibly to memory, the question of the poet—

“ What *bodes* the owl's shrill note
That frights me from my sleep ?”

Mme. CIVATTE exhibits some beautiful artificial flowers, and a very curious *rose clock*, with odd devices. A rose clock.

There lies on the table, near by, a rude sketch, in pencil, which, upon examination, appears to be Sir Joseph Paxton's *first* shadowing forth of his great work—The London Crystal Palace. It is a singular illustration of the old proverb—First sketch of the London Crystal Palace.

“Great ends from small beginnings rise !”

A piece of the old ship “*Mayflower*,” closely resembling a wasp’s deserted nest, carries us back to Plymouth Rock in 1620. Piece of the “*Mayflower*.”

Some of the “*Eyeless fish*,” from the Mammoth Cave of Kentucky, are exhibited near by, and seem to teach us that the Creator makes nothing in vain, and where eyes would be of no use, withholds the organ of vision. Eyeless fish from the Mammoth Cave.

The odour of BAZIN’S perfumery steals upon us as we pass up the court, amid hair-dyes, tooth-powders, and knick-knacks of various kinds, with further glimpses of the taxidermist’s handiwork, upon our left. As we turn another point in our progress, we find ourselves (if not tempted to the balcony) in front of a curious piece of work, to wit : a model, or representation of Greenwich street, in New York, made in confectioner’s paste ! The scavenger’s cart is certainly a queer subject to be done in sugar ! Birds and butterflies also, of gay plumage, are sweet examples of the confectioner’s skill. Perfumery, hair-dyes and knick-knacks.
A street in sugar.
Sugar birds.

Passing directly along the passage, southward, we may notice the beautiful mosaic panels of VOLKERT, and if our mouths water for the cakes and confections below them and around us, let us pass resolutely on, on—by the chocolate-tree with very bright fruit, by the gay little party of dolls, all dressed in Mosaic panels.
Chocolate tree.

Ivory work. their best, and by a variety of objects, in ivory and bucks-horn, displayed by ROHDE ; on still, by TUTTLE's case of "baby-jumpers," and then, along the line of objects, stretching to the centre of the Palace.

Baby-jumpers. Here are beautiful objects, made of mother-of-pearl, in Philadelphia, by HART & Co. ; the fine ivory

Mother-of-pearl goods. combs of FENN, (upon the right hand,) with a fanciful display of Lilliputian combs, and the various

Ivory combs. beautiful articles of turned ivory by SHARDLOW. All these, and a dozen other truly tasteful and elegant displays of miscellaneous articles, attest the skill of our metropolitan artisans. A very large number of

Turned ivory. exhibitors represent Class xx. of the Official Catalogue, which, under the comprehensive title of

Class xx. "wearing apparel," covers half the gallery we are now in. Boots and shoes, radiant with varnish, and slippers, gay with crimson-blue and gold embroideries on cloth, satin, and morocco, are everywhere displayed. The elegance of the show-cases in this section, has much to do with the general effect. Here, a pyramid of boots and shoes, shoots up to an apex crowned with an eagle, and close by it, a blooming widow clad in weeds revolves in a crystal case, to display the beautiful mourning she wears ! We find, at the end of this line, and a few steps beyond the excellent ready-made clothing of MUNROE & Co., a model of the great national monument to WASHINGTON, now being erected at the Capitol. It is placed here by the consent of the Association, and at each corner of it, is a crystal box, into which visitors may put their contributions, be they ever so small, to aid in building this monument, more to our own national honour, than to the honour of the already immortal WASHINGTON.

Grief for the street.

Choice clothing.

Washington monument.

Tribute to Washington.

After paying our tribute, we continue our examination of the goods displayed in the north gallery,

entering a passage, just beyond the show-case and shoe-case of FROTHINGHAM & Co., which conducts us between hats and bonnets, from a number of manufacturers, all of them aiming to display the newest *modes* in the most attractive manner. Military hats, children's hats, and gay bonnets, present a long succession to the eye. Beyond these, we find ourselves in the region of perfumery and soap, of which commodities there is certainly no lack in the Palace. Soap rises in pyramids and columns, like monuments in a cemetery. The most unique exhibition of it, however, is made, by TAYLOR & Co. of Philadelphia, in the form of a soap window, bearing a deceptive resemblance to stained glass.

Show and shoe case.

Hats and bonnets.

The region of soap.

Soap window.

The next passage discloses to our notice, upon the *right* hand side, an extensive variety of hats from LEARY, and KNOX, and other makers of New York, and from OAKFORD of Philadelphia, and alternating with these, boots and shoes in too great a variety to be particularized. The same description of articles present themselves to us as we return on the other side of the passage.

Hats.

Boots and shoes.

A collection of articles made by the children connected with the Pennsylvania Institution for the Blind is found upon this line, followed by some excellent specimens of shell and horn combs, by two or three makers. An index to a most important and extensive branch of industry is offered us in a case of shoe-pegs—insignificant articles in themselves, but becoming of importance by the extent of their manufacture and use.

Articles made by blind children.

Shell combs.

Shoe-pegs.

We pass now into an open court at the extremity of the gallery, occupied by the few glass and earthenware manufactures represented in the United States department of the Exhibition. The centre of the court contains a beautiful display of what is called "patent flint enamelled ware," made by the

Glass and earthenware.

Flint-ware.

Pottery.

United States Pottery Co. in Vermont. It is a species of ware particularly well adapted to domestic uses, on account of its great strength. The wares exhibited are vases, basins, pitchers, and indeed almost all descriptions of household utensils. Upon the left we find the beautiful porcelain of HAUGHWOUT, DAILEY & Co. of New York. This is exhibited as affording examples of gilding and painting executed at home, and not as American ware, that being imported from France in the plain state. This house is, we believe, the only one in the country which has entered largely into the decoration of china. They employ a hundred persons in this beautiful art, and their examples are remarkably beautiful both in design and execution.

Haughwout
and Dailey's
decorated
porcelain.

Watch-glasses.

Watch-glasses of every variety are displayed by BERGER & WALTER, and a collection of painted china and door-knobs by CARTLEDGE.

China knobs.

Brooklyn cut glass.

The cut glass of the Brooklyn Glass Company presents an exquisite appearance, both from the purity of the material employed and the chaste elegance of the style of cutting. The droptric lenses exhibited by this Company are remarkably excellent.

Droptric lenses.

New England Company's glass-ware.

We turn now to inspect the extensive variety of glass-ware displayed by the New England Glass Company, the largest glass manufacturing establishment in the United States. It embraces pressed, fine cut, engraved, and fancy ware. Among the latter, are globes and vases, which have the appearance of solid and brilliant silver. This beautiful effect is produced by diffusing between two surfaces of glass a solution of silver, which adheres to the glass and retains the fresh colour of the metal. By using coloured mediums, brilliant hues are imparted to the glass, and they have all the effect of genuinely coloured glass.

Silvering glass.

Glass-ware.

Specimens of excellent glass-ware, with some ex-

amples of decorated porcelain, are exhibited by Porcelain.
 STOUVENEL & Co. We notice, as we proceed along
 the only remaining passage in this gallery, a novel
 style of putting up "extracts" for perfuming hand-
 kerchiefs. Very small and thin glass cylinders, hold-
 ing only a drop or two, are filled with the essence, Fancy
perfumes.
 and when it is required for use, the bottle is crushed
 by the fingers in the handkerchief. The original
 aroma of the essence is thus obtained. We observe
 here a jointed mosquito frame of wire, which is an Mosquito
bars.
 admirable contrivance. One large enough to pro-
 tect a bed may be folded into a small compass.

Small manufactures appear in abundance as we Small wares.
 proceed along the passage. Sand-papers, buttons,
 wooden-boxes, and wash-boards alternate with each
 other, and with clothing apparel, the latter so abun- Clothing.
 dantly displayed, that we may reasonably consider
 the gallery a grand furnishing magazine! *Robes de*
chambre, shirts, hosiery, silk dresses, and mantillas,
 now follow each other. Far above them, we may
 notice window-shades in every variety of pattern. Window-
shades.

The horological cradle, to be found here, will not Self-rocking
cradle.
 fail to attract the attention of all who know the
 difficulty of getting the baby to sleep, and the
 patient devotion to the rocker which it demands.
 This ingenious machine rocks itself, and ticks a
 soothing "lullaby" to the little "incumbent." Lullaby.

Now we pass cedar-ware, of all descriptions; and Cedar-ware.
 the little folks will certainly stop to admire the
 miniature carriage and horse displayed by Rock-
 WELL. If they should express a desire to have one
 of his handsome rocking-horses, we should not blame Rocking
horses.
 them.

We now arrive at that portion of the gallery
 devoted to the Agricultural Department—one of AGRICUL-
TURAL
DEPART-
MENT.
 the largest, and, estimated by its relations to our
 daily wants, one of the most important, in the Exhi-

Class ix.

Numerous exhibitors.

bition. Class ix. of the Official Catalogue numbers over a hundred exhibitors, and their contributions extend over a large amount of space. We cannot examine them in detail, nor would they indeed possess sufficient interest to the general visitor to warrant us in so doing.

Ruggles & Co.'s farm and dairy implements.

We must do their earnest, ingenious, and diligent inventors and makers the justice to give them a general review. We commence, then, at the numerous implements exhibited by RUGGLES & Co. of Boston, and find ourselves surrounded on one side by ploughs, and on the other by dairy and household contrivances. A churn, or a sausage-stuffer, or an apple-parer, may seem a small affair to the multitude, but ask the housewife if they are not important appliances! Among the ploughs, with glittering shares and polished handles, we note one in strange contrast—a venerable antique, dating back to 1742, and *said* to have belonged to Roger Sherman. How eloquent it is, with its rusty blade and worm-eaten frame, of the past!

An old plough.

A vacuum pump.

We must not fail to notice, beyond this, a pump, which may be called a vacuum-chamber pump—a very simple and admirable contrivance for agricultural purposes.

Allen & Co.'s implements.

But we pass on, by a butter-working table, and by corn-shellors, into the midst of another large display, by ALLEN of New York—embracing all sorts of useful farm and house contrivances.

Mammoth reaping and mowing machines.

A long court now stretches before us, one side of which is occupied by a succession of mammoth machines, for reaping and mowing. There are, we believe, ten of these, all differing so much in some important particular, that letters patent have been granted to them all. We do not propose to determine their merits, but we cannot pass, without recognition, the now world-renowned machine of

McCORMICK—the great Illinois reaper, which opened the eyes of our excellent neighbour, John Bull, to the genius and energy of Yankee farmers. Of this admirable machine, not fewer than 7000 have been made in Chicago within seven years. The other side of this court exhibits all manner of domestic and field contrivances,—from a coffee-roaster to a flour-mill. We may inspect bee-hives, of new construction, particularly that of PHELPS; (and if we are inclined to see the industrious little creatures at work in this excellent bee-house, we have only to ascend a platform and be gratified;) and we may turn the handles of machines to pare apples, to churn butter, to cut vegetables, or to grind paint.

The wonder
of John Bull.

Extensive
range of
articles.

Bee-hives.

Working
bees.

The end of the passage brings us among threshing and harvesting machines—great labour-saving contrivances; and an uncouth and formidable looking implement called a rotary spade.

Threshing
machines.

Rotary spade.

A prairie plough we find to exhibit many points of difference to those we are accustomed to see used in our lighter soil. A fire-escape ladder appears here, though with what immediate relationship to agricultural implements we are unable to tell. Passing rapidly forward, we find a model of a lever gate, which rises as the car or wagon approaches, and falls again when it has passed through. “The Golden Harvester” has a promising name, and, in the model exhibited, seems to be really an efficient machine for gathering in a harvest. At this point, some iron ploughs appear, which are much esteemed where they have been tried; and turning around them, we find ourselves in the region of garden and light field tools, of all descriptions. Of these, the Tuttle Manufacturing Company makes a fine display—passing which, we linger awhile at a case containing a great variety of fine models of fruits, prepared by Mr. GLOVER, as specimens for horticulturists. The

Prairie
plough.

Fire-escape.

Lever gate.

The Golden
Harvester.

Iron ploughs.

Garden tools.

Fruit models.

Various field
implements.

collection is remarkably interesting, as presenting fac-similes of the varieties raised by the exhibitor. Shovels, spades, scythes, reaping-hooks, hoes, and rakes, appear in great variety to the end of the passage, where we launch into a wilderness of machines, the particular merits and purposes of which we may reasonably leave the visitor to gather from the placards and hand-bills affixed to nearly all of them.

Church organ
on a new
principle.

Surrounded by these multitudinous implements for the field and for the barn, we find another instrument bearing no relationship whatever to its associates. It is a church organ, of no very grand and imposing appearance, but one which every day pours out tones of deep, impressive, and delicious melody—of such volume, moreover, that we wonder how so small an instrument can discourse so powerfully. The organ was built by GEMÜNDER of Massachusetts, and exhibits some novelty of principle. It has a wind-chest extending the whole length of the organ, with an air-chamber for every stop, and every pipe in direct connection with the chest. The result of this construction is, increased power and promptness of utterance, and easy action of the wind.

Stained glass.

The present is a favourable occasion to notice the stained-glass windows of HANNINGTON of New York, which are displayed against the north side of the gallery. They are excellent examples, in design and colour.

THE PICTURE GALLERY.

THE rapid increase in the number of applications for space in the Crystal Palace, during the early spring, indicated the probability that its original dimensions would be unequal to the demand. It was therefore resolved to erect an additional building—the lower part of which is occupied by the machinery, and the upper part is the Picture Gallery, to the entrance of which our examination of the agricultural implements has finally conducted us. Entering the gallery at the right hand of the organ, we stand at nearly the centre of its length, which is 450 feet. The width of the hall being only 21 feet, this extreme length gives it an exceedingly narrow appearance. It is, however, well adapted to the purpose for which it was constructed.

Picture
Gallery over
the Machine
Arcade.

Entrance.

Its length
and breadth.

The Official Catalogue of Pictures contains 685 numbers. More than a hundred other pictures are distributed through the courts of the Palace, the greater number of which have been rejected by the Director of the Gallery as unworthy of a place upon the walls. It would be too much to suppose, that, of the large number accepted, there are not many others which a severe standard of judgment would have excluded. Seven hundred pictures, of absolute merit, are not easily collected together at a brief warning; and none need expect to find the collection, in the Crystal Palace, exempt from the fate of

Number of
paintings.

Rejected
pictures.

Mixed
character.

all voluntary exhibitions—which is to be composed of works “good, bad, and indifferent.”

Official
Catalogue.

The visitor will not need the aid of our guide-book, in the gallery, as much as he did in the main edifice. The objects which it contains are all prominently displayed before the eye ; and, moreover, the Official Catalogue of Paintings gives, in nearly all cases, the information concerning each picture which the visitor really needs to know. We shall not, therefore, enter into details in this part of our review. The pictures are distinctly numbered, in the order in which they are hung upon the walls—beginning at the centre of the gallery, and continuing completely around it, on the left hand.

How the
pictures are
numbered.

Double
numbers
explained.

A few of the pictures have two numbers upon them, the gallery number, and the national, or serial number, under which they came to the Exhibition. This should have been avoided by the removal of the latter marks ; but the visitor need not be seriously embarrassed by their presence, if he will only note the distinction between them and the gallery numbers, which is broadly marked.

Absence of
American
paintings.

The general absence of American pictures, is the subject of much surprise and remark—scarcely more than thirty* appearing upon the walls. Indeed, our principal painters have, with very rare exceptions, contributed no works to the gallery. Why this is the case, we cannot well explain, and we certainly regret that they have left the field almost entirely to foreign exhibitors.

To be
regretted.

German and
Dutch
pictures.

The German and Dutch artists are by far the most numerous expositors, sending, together, nearly one-half of the entire collection. It is worthy of mention, perhaps, that their contributions are equal in

* Not including the water-colour sketches, numbered separately at the end of the Official Catalogue.

number, Germany sending 150, and Holland 147 pictures. Of the other half, France contributes about 100, Italy nearly 80, Great Britain over 50, and Belgium about 30. A few pictures from Switzerland and Austria, and a collection of old paintings, contributed to the gallery, by Mr. CRISTADORO of New York, and the water-colour sketches from the New York Water-Colour Society complete the catalogue. There are nearly seventy pictures from the Düsseldorf artists, a body of painters standing in the front ranks of modern art. To particularize the works of these, and other principal artists represented in the gallery, would require an amount of space not at our command. The picture, catalogued as No. 314, and found at the point of exit from the gallery, is claimed to be a genuine CARLO DOLCI, and will, of course, be an object of great interest to every one. Of the other reputed originals from the great masters of another age, there is a GUIDO RENI, No. 144; an exceedingly doubtful, if not *impossible*, MURILLO, No. 649; a CORREGGIO, (on parchment,) No. 349; and a second GUIDO RENI, No. 653. The fine picture, at the north extremity of the gallery, No. 190, will be found worthy of close attention. It represents "The Return of Regulus to Carthage," and is rather a recent acquisition, displacing a work called "The Deluge," now to be found upon the landing of the stair-way by which we approached the gallery. There, also, may be found a large painting, No. 651 of the Catalogue. No. 8, painted by WINTERHALTER, is a contribution from the Queen of England, and embraces portraits of herself, Prince Albert, the Duke of Wellington, and his god-son, Prince Arthur.

Number of contributions from different countries.

Old paintings.

Water colours.

Düsseldorf pictures.

A Carlo Dolci.

A Guido Reni.

A doubtful Murillo.

A Correggio.

Another Guido Reni.

Return of Regulus.

The Deluge removed.

Picture from Queen Victoria.

A picture of mosaic stone.

No. 272 is a picture of mosaic stone, the only example of the kind in the gallery. More than this concerning the paintings, it is, perhaps, impossible to say, without instituting comparisons that would

Character of
the pictures
collectively.

be regarded as invidious. The taste and judgment of the visitor will be called into exercise, as the pictures come successively to his notice. Whatever might be the verdict of a severe critical judgment upon the merits of the entire collection, it is certainly deserving of careful and repeated examination, and every successive visit will reveal to us new beauties and excellencies in not a few of the works.

Bank-note
engraving.

There are some excellent specimens of bank-note engraving, displayed on the west wall, in the centre of the gallery. Here, also, are some admirable medallions, modelled in plaster, by JONES. They are four in number, representing Clay, Webster, Bishop Hughes, and T. Addison Richards, Secretary of the National Academy—all portraits from the life, and of wonderful fidelity.

Beautiful
medallions
in plaster.

End of the
gallery.

Choice coins
and medals.

In departing from the Picture Gallery, we may, by descending the northern stair-way, inspect there, a large collection of coins and medals, which was made by the late Count Pineasco, of the city of Mexico, who left, it is said, at his death, art-property to the value of a million and a half of dollars.

Large picture
from France.

Over these is displayed a large picture, by ETEX of Paris, which he calls, in characteristic French phrase, "*La gloire des Etats Unis.*" It is not yet embraced in the Official Catalogue—as is the case with several other French pictures, all of which have just arrived as these pages are going to press. Another of these, by ETEX, represents "Christ preaching at the Lake of Genesareth."

Another.

Engravings.

Illuminated
cartoons.

Further down the stairs, we shall find a collection of steel and wood engravings, exhibited by PUTNAM & Co. as examples of American art. Nor must we overlook twenty-eight exquisite cartoons, executed by a lady of New York, in the illuminated missal style. They are portions of the Psalms. We proceed, now, through the Machine Arcade to the Cabinet of Minerals.

THE MINERALOGICAL CABINET.

THE contributions embraced in Class i. of the Official Catalogue, are exhibited in a spacious room, attached to the main building, at the southern extremity of the Machine Arcade. They were arranged under the direction of Professor BENJAMIN SILLIMAN, Jun., to whom the Association confided the control of the Mining, Mineral, and Chemical Departments of the Exhibition.

Mineralogical Cabinet.

Arranged by Professor SILLIMAN.

The Catalogue of this department, recently published, under his direction, is so simply and judiciously arranged, as to form, in itself, a satisfactory guide to the visitor.

Its catalogue the best guide.

The specimens of native ores, from all parts of the United States, are exceedingly numerous, and are ranged, in geographical order, upon the sides of the Cabinet—commencing with New England, on the south side, and terminating with California, upon the north side of the Cabinet. These are followed by the minerals and fossils of England and Germany. The fossil remains in the Blue Lias, and various sections of ammonites from England, are very beautiful. There are, also, German fossils of the Solenhofen slate, remarkable for their variety and beauty.

Native ores, how arranged.

English fossils.

Fossil remains in the Blue Lias.

German fossils.

In the cases which occupy the centre of the Cabinet, the rarer minerals of the United States and of foreign countries are displayed. Many of these will gratify the visitor, by their peculiarity and beauty. Here are malachites, with their glittering hues, from Africa, and from our own country. Tourmalines,

Central cases.

Rarer minerals.

Malachites.

Tourmalines.

Agates, &c.	rose-quartz, agates, garnets, and amethysts abound.
Silver ores.	The Chilian and Mexican silver ores, will repay our notice, and we must obey the popular will, and linger, especially, at the case in which gold is so lavishly displayed, that, within the grasp of one's arms, there is an amount of it, equal in value to One Hundred
Heaps of gold.	Thousand Dollars, in ingots, nuggets, and grains!
German series of minerals.	This is principally the gold of California. The German minerals are very numerous, and constitute
Curiosities.	complete series, arranged with great taste and skill. Among the curiosities of the Cabinet, we find <i>models</i>
Models of diamonds.	of the celebrated Koh-i-noor and the Great Mogul
Fine emerald.	diamonds, displayed together with a fine emerald.

At the door of the Cabinet, opening into the grounds of the Palace, we find a beautiful specimen of dog-tooth spar, from Weyer's Cave in Virginia.

Dog-tooth spar.	Passing out at this door, we discover blocks of
Outside.	coal of vast dimensions, and a <i>monument</i> of great
Coal monument.	height, formed of a series of blocks of the same
Masses of ore and marble.	material. Here, also, are huge masses of copper, iron, and lead ores, and white and coralline marbles, all from American mines and quarries.

Hastily as we have inspected the Mineral Cabinet, we regard it as one of the most attractive features of the Exhibition, and one to which we would gladly devote days instead of moments.

Last words.	Our task is ended. We have conducted the visitor through all departments of the Crystal Palace, and have endeavoured to make the tour profitable as well as pleasant. That we have said all we should have said, or said all wisely that we have said, it is not in our presumption to imagine, much less to assert. We have, at least, performed our duty, with good will and in good faith. Here, therefore, we make our <i>adieu</i> .
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IN

The New York Crystal Palace,

AND

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BY

WILLIAM C. RICHARDS, A.M.,

EDITOR OF THE "OFFICIAL CATALOGUE."

"But as I slept me mette I was
Within a temple ymade of glas,
In which there were no images
Of gold standing in sundry stages,
In no rich tabernacles,
And with perrie no pinnacles
And no curious portraitures,
And quaint manner of figures
Of gold work, than I saw ever."

Chaucer.

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10 Park Place, November, 1853.

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While it is intended that each number shall form a copious and agreeable variety of popular, entertaining, and useful reading, a higher object is also kept in view. It will continue to be the aim of the proprietors to provide in each number one or more articles of ability, well considered, impartial and independent, on public affairs or matters of national interest.

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The Publishers consider it almost superfluous to repeat that no efforts on their part, and no reasonable expense, will be spared to render this work creditable to the country, and a worthy and satisfactory medium of communication between our most eminent and competent writers and the great reading public. It is intended that "*Putnam's Monthly*" shall be an acceptable and welcome visitor in every intelligent family in the land.

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